

# THE NORTH DAKOTA FARMER



"THE NORTH DAKOTA FARMER FOR NORTH DAKOTA FARMER"

Alex Alin

517

Vol. 17, No. 4

Lisbon, North Dakota, October 15, 1915

50 Cents A Year



Boys' Encampment at Valley City, 1915  
Upper, A Lesson in Horse Judging. Lower, A Lecture on the Dairy Cow.

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# THE NORTH DAKOTA FARMER

Vol. 17, No. 4

LISBON N. D., OCTOBER 15, 1915

50 Cents a Year

## The Business of Agriculture

By John H. Worst, Pres. N. D. A. C.

Agriculture is a big business—a tremendously big business—when viewed in all its bearings. While its foundation is built primarily upon production, yet production is not the most vital element associated with farming. Agriculture is a mode of life as well as a means for producing livestock, animal products and other crops. It also is concerned with society, with economics, and with government. Its responsibility can scarcely be measured, since not only the prosperity, but the very life of the people depends upon the intelligence and industry of the farmers of the country.

The business of agriculture, therefore, demands of those engaged in this great industry far greater responsibilities than merely tilling their lands and tending their flocks and herds. It is incumbent upon farmers also to make their vocation prosperous that it shall not be discredited in the eyes of young men looking for a career and so desirable that country-born young men shall aspire to become farmers instead of deserting the rural districts only to swell the population of our cities.

It is a safe guess, moreover, that agricultural prosperity will not be general nor continuous except farmers themselves take as much interest in the distribution as they do in the production of crops. Neither will young men desire to engage in farming for a livelihood except the mode of life adopted by farmers as a class is such as will appeal to them.

With modern equipment for the farm and the household, both of which can now be had without great expense, country living can readily be made comparable with urban living, with many advantages in addition which no city home can offer. The great outdoors naturally appeals to those who love freedom and the independence of the open country, and when farmers elect to become independent farm life offers both prosperity and home comforts.

After all life is what we make it, whether in urban centers or in the rural districts. However, the open country offers healthy outdoor employment and freedom from many of the temptations that confront city residents and especially a place where the children need not suffer from the evils incident to city environments.

If farmers were to improve their business and exert their influence in the solution of economic problems with a fair degree of unanimity, the profits of farming would not only be greatly increased but could be relied upon with some degree of certainty. The social life also can be made what is desired whenever community spirit is aroused and each family contributes a trifle toward promoting the community welfare.

As long, however, as farmers support an army of unnecessary middlemen and depend upon them to price their products, they will bear the chief burdens of government without realizing their fair share of its benefits. The study of co-operative marketing, therefore, cannot begin too soon. It will take time and patience to perfect co-operative organizations, but to this it must come if a reasonable degree of independence is to be realized by the farmers of this state.

It stands to reason that the individual farmer competing with every other farmer, and in the face of organized business and labor everywhere outside of agriculture, is up against an impossible proposition. Rather than be confronted with such conditions the average young man prefers to cast his lot elsewhere than in agricultural pursuits, hence he hies himself to town for better or for worse—generally for worse. The trouble is not with the excessive labor incident to farming as a vocation, but because the business of farming is not complete within itself. Production and distribution, therefore, must go hand in hand before the farmer can command his own resources and realize a fair profit on his labor and investment.

How can this be accomplished? As before stated the problem must be worked out by farmers themselves. They must learn to co-operate. They must study economics. They must evolve an agricultural statesmanship. They must take the initiative in suggesting equitable laws that shall govern their business; then elect capable legislators from their own ranks to place them upon the statute books and demand their proper administration.

This will undoubtedly carry the business of farming into the domain of politics, but suppose it does. Whatever else may be displaced by the advent of agriculture into politics, the change will doubtless prove salutary. It certainly will not lower the standard of the people's government.

When the farmers of Denmark took command of the political situation, so far as it related to their business, their prosperity advanced by leaps and bounds. Instead of a government for the benefit of a few aristocrats, it at once responded to the will of the people, and by co-operation and education the Danish farmers soon excelled in acre-production and at the same time established permanent markets for their soil and animal products which makes them the envied farmers of northern Europe. Over there the farmers simply manage their own business—both ends of it. And to perpetuate their business and improve it they provide agricultural education for their children in all the public schools and in numerous special schools. In other words their educational system trains their children in terms consistent with the industrial needs of the country.

When we of the great agricultural northwest place the business of farming upon a plane which approaches in development and system that of the manufacturing or mercantile interests of the country, then agriculture will come into its own and command the respect and admiration of thousands that now look upon it with disfavor.



# What Does It Cost to Raise a Bushel of Wheat?

By Chas. Christadoro

The cost of producing a bushel of wheat, according to the demonstration farms in North Dakota, runs from \$7.93 to \$7.98 per acre. Naturally, the cost of wheat is dependent upon the number of bushels yield, per acre, everything else being normal. This statement, perhaps, might be changed a little, in fact turned quite around, by saying that it costs so much to farm an acre of wheat land, no matter what the yield or the price at the elevator might be. That part should really come under the head of profit per acre and not so much the cost of farming an acre. The yield, in bushels, plus the price secured at the elevator, compared with the cost of production per acre, tells the story of profit or loss.

I have two estimates in front of me from which I will quote, wherein the cost of producing an acre of wheat is far in excess of the estimates given by the report from the demonstration farms. This first case is where the figures cover ten acres, and, without going into too much detail, I will mention the items and give the results: Discing at 50 cts., planking once at 25 cts., dragging once again at 25 cts., plowing 7-inch deep, packing disc rims at 50 cts., drag-harrow once at 25 cts., 10 bu. of Marquis wheat, formaldehyde, 75 cts., drilling 50 cts., planking 25 cts., harrowing 25 cts., 4 lbs. twine per acre at 10 cts., cutting and stacking, 95 cts., threshing 340 bu. at 8 cts., drawing to elevator at 3 cts., boarding threshingmen, etc., at 1 ct. per bu. The total of this cost is \$112.10 or \$11.21 per acre. There were 340 bu. sold to the elevator at 98 cts., yielding \$333.20, which left a profit of \$221.40. Yield and price at the elevator saved the day for this man.

Again here is the other estimate, on a single acre:

Plowing with four horses.....	\$3.00
Double discing.....	.75
Harrowing, three times.....	.75
Seeding.....	.40
Cutting.....	.40
Twine 2½ lb. at 10 cts.....	.25
Stacking.....	.20
Hauling to Market, at 2 cts.....	.50
Threshing at 10 cts.....	2.50
Dockage at elevator ½ bu.....	.40
Seed, 1½ bu. at 80 cts.....	1.20
Total.....	\$10.35

This farmer has evidently forgotten all the items of cost, for had he correctly gotten them all into the bill his cost would have approximated \$15.00 per acre.

Again, we have the figure that the cost of producing an acre of wheat in Kansas last year averaged \$11.34 per acre and how much was forgotten in that estimate I do not know, but this was exclusive of taxes. Many other estimates might be given and it is safe to say that, if any of the foregoing estimates be at fault, they are too low and not too high. Rarely is an estimate given in connection with the cost of producing an acre of wheat but what some essential item is forgotten.

Theoretically and made up from the figures that I have seen from time to time, I am led to believe that if the expenses connected with the production of an acre of wheat were figured as a business man would figure his cost, putting in labor at the market price, taxes, depreciation and wear and tear on machinery, repairs, dead horses and a few other unconsidered trifles, incidentally mentioning the never considered value in dollars and cents of the time of the good farmer's wife, \$13.00 to \$14.00 would be the safer figure to calculate upon as to the cost of producing an acre of wheat. At \$14.00 the wheat should bring \$1.00 at the elevator and the farmer should produce 14 bu. to the acre, and every bushel sold at less than a dollar would mean a loss to that farmer of so much per acre. If he got 80 cents for his wheat at the elevator, every acre farmed that year would mean a loss to him of \$2.80. If his yield were but ten bushels to the acre and he got but 70 cents at the elevator he would be worse off yet.

On an average yield of 4½ bu. per acre in one of the states of the northwest two or three years ago, the farmer, to play even, and just get his \$14 per acre cost out of it, should have gotten over \$3.00 per bu. at the elevator which, of course, he did not get, nor will he ever get such price. In New York in 1864 wheat was \$2.69 per bushel; in 1865 74 cents towards end of the year and in 1867 \$2.85 per bushel. This would have meant, by the time the miller got thru with the wheat, seventeen or eighteen dollars per barrel for flour.

Raising wheat is a necessity and we might as justly say, a farming luxury. When you think of the old days of all wheat farms, unless conditions then were different from what they are now, the wheat farmer was a good deal in the condition of the old apple woman in New York who peddled her apples on the street corner. She sold them very cheaply indeed and a kindly friend pointed it out to her, by a little simple figuring, that she was losing on each apple she sold. She came back with the remark that that didn't make any difference. It wasn't the single apple she made her money on but it was the quantity she sold at that good stand she had. So when I read of the average wheat crop of a state, going ten or twelve bu. to the acre, and I think of the elevator paying from 65 cents to 70 cents per bu. for wheat, the \$14.00 cost per acre looms up in front of me and I naturally wonder where the farmer gets off at in a profit sense. Of course, the salvation of the farmer is to run up his yield, if he can, and if he can get twenty to thirty or even forty bu. per acre as they do in some parts of Montana, he would be ahead of the game.

I have often wondered what would have become of the northwest if it had up to to-day remained in all-wheat country, with scores of Dalrymple farms scattered about. When Mr. Hill encouraged stock-raising in the northwest and encouraged diversified farming he saved the day for the farmer and, incidentally, saved the Northern Pacific and the Great Northern roads from evolving into streaks of rust upon the open prairie. There was a Siamese twin bankruptcy waiting at the all-wheat switch for farmer and railroad as well.

To sum up, when the wheat farmer, in his peculiar way of figuring, calculates that his wheat costs him six or seven dollars per acre to produce, unless all figures lie, he's living in a fool's paradise.

Now, here is a farmer tilling 320 acres of land, from which are deducted 8 acres for road and yard. It is a straight wheat proposition.

He figures his land at \$25 per acre. Then he goes on with his investment account on which he figures interest at 7%. He includes 8 horses, 1 gang plow, 1 drag, 1 disc, 1 drill, 1 8-foot binder, 2 wagons, 1 hay rack, 1 mower, and hay-rake, 1 manure spreader, 1 buggy, 4 sets of harness, 1 driving harness. This is all he can think of and were he to think again no doubt he would find he had, despite all his care, forgotten something, yet there are no luxurious trimmings in this



list. So land and tolls, we will call them, figure up \$10,233 and 7% on this is \$715.

Now come taxes, wages and board 1 year for farmer, 1 man for 7 months, seed (\$312), twine, threshing, board of 8 horses, repairs and depreciation. To many farmers unused to figuring costs this statement may be all Greek. And as stated above a close scrutiny of the list might even show one or more items overlooked. But the expenses, as shown, indicate that to farm that stand of wheat it costs \$3,759 or \$12.25 per acre.

Is it not safe to figure that such accurate figuring applied to a ten or twenty-acre farm would go nearer to \$14 than to \$12 per acre? But wheat is a cash crop and perhaps the element of cash overbalances, for the time being, the question of profit.

Here is what it costs to produce a bushel of wheat, in the several states, according to the U. S. Government.

Maine \$.95, Vermont \$.64, New York \$.77, New Jersey \$.82, Pennsylvania \$.84.

Delaware \$.78, Maryland \$.74, Virginia \$.85, West Virginia \$.93, North Carolina \$.85, South Carolina \$.96, Georgia \$.92, Ohio \$.79, Indiana \$.76, Illinois \$.64, Michigan \$.68, Wisconsin \$.61, Minnesota \$.61, Iowa \$.62, Missouri \$.68, North Dakota \$.62, South Dakota \$.62, Nebraska \$.55, Kansas \$.63, Kentucky \$.81, Tennessee \$.84, Alabama \$.87, Texas \$.69, Oklahoma \$.60, Arkansas \$.72, Montana \$.44, Wyoming \$.50, Colorado \$.48, New Mexico \$.54, Arizona \$.72, Utah \$.63, Idaho \$.50, Washington \$.52, Oregon \$.54, and California \$.54.

It means much whether, when figuring the cost of producing a bushel of wheat, your yield per acre is 5 bushels or 40 or 50 bushels.

Montana, because of her high yields per acre, gets the blue ribbon at 44 cents per bushel cost.

#### SEED CORN

C. P. Hartley, U. S. Department of Agriculture

The average production of corn to the acre for the entire United States is but 26 bushels, yet in practically every section four times that quantity is frequently produced. Improvement of the quality of seed is the least expensive method of increasing the yield per acre.

There is each spring a scarcity of good seed corn. This condition is all the more regrettable because it need not exist and it is much more serious than commonly supposed because many do not fully realize the tremen-

dous loss to themselves and the country due to planting inferior seed.

Autumn is the time to prepare for a profitable corn crop the following season. It is hoped that this bulletin will prove more valuable and timely than any replies that can be written to springtime correspondents regarding seed corn. Its object is to prevent the scarcity each spring of first-class seed corn. This scarcity can be prevented by selecting the seed when it is most abundant and when the very best can be obtained—at ripening time before it has been in any way reduced in vitality. Many let this opportunity pass, expecting to purchase their seed corn, only to find that they can not buy at any price in the winter or spring as good seed as they could have selected in the autumn.

By far too many consider seed good simply because it will grow. To be first class, seed must be—

(1) Well adapted to the seasonal and soil conditions where it is to be planted.

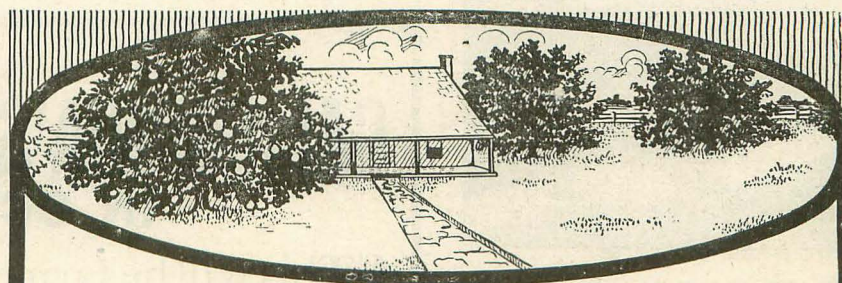
(2) Grown on productive plants of a productive variety.

(3) Well matured, and preserved from ripening time till planting time in a manner that will retain its full vigor.

The importance of the three requirements just enumerated has been demonstrated experimentally by the Office of Corn Investigations of the Bureau of Plant Industry. The results given briefly, as enumerated, are as follows:

(1) For a series of five years 12 well-bred varieties were tested in 10 Northern States, equivalent lots of seed being used in each State. Varieties that produced most in some States were among the poorest in others.

(2) Seed ears taken from the highest yielding rows of ear-to-row breeding plats have repeatedly produced better than seed ears taken from poorer yielding rows. Seed ears from the best producing stalks found in a general field produced more than seed



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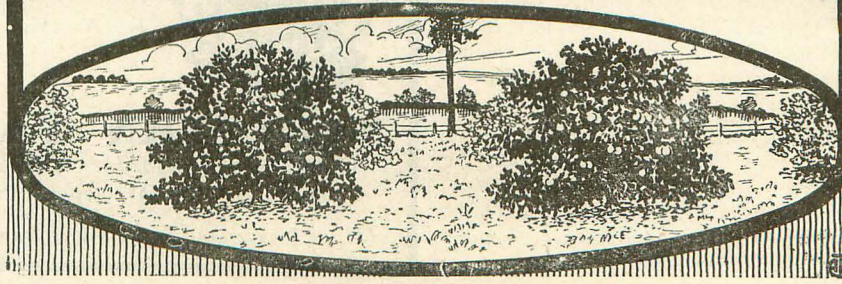
Before property is sold in the town of Lake Alfred, or adjacent land for the building of citrus fruit groves, it must be seen by you or selected by your personal representative. This rule is somewhat unusual, but we do this for two reasons: First, because we want all who buy to be entirely satisfied, and second, because we know that if you will visit Lake Alfred you will be almost sure to purchase town or grove property, or both. All requirements are fully met.

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Geo. H. Hollister, President Northern Trust Company; F. C. Gardner, Gardner Hotel Company; B. G. Tenneson, attorney, Fargo, North Dakota; Ed Pierce, banker and attorney; F. W. Froemke, President Ransom County Immigration Association, Sheldon, North Dakota; Thomas Pierce, banker, Enderlin, N. D. These gentlemen are prominent citizens of North Dakota, whose names will be recognized by persons familiar with the development of the eastern portion of the State and western Minnesota. They became interested in Florida through spending their winters there and have thoroughly investigated all sections of the State. A considerable number of other substantial citizens of the Dakotas and Minnesota live at Lake Alfred during the winter, and you are invited.



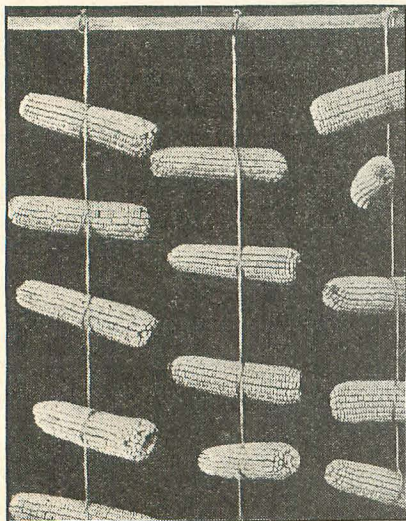


ears taken without considering the productiveness of the parent stalks.

(3) Four bushels of ears were divided into two equal parts, one part being well taken care of and the other placed in a barn as corn is ordinarily cribbed. The well-preserved seed gave a yield on poor soil 12 per cent higher than the poorly preserved and 27 per cent higher on fertile soil, notwithstanding the fact that both lots of seed germinated equally well.

#### How to Gather Seed Corn

The only proper way to select seed corn is from the stalks standing where they grew, as soon as ripe and before the first hard freeze.



As soon as the crop ripens, go thru the field with seed-picking bags and husk the ears from the stalks that have produced the most corn without having any special advantages, such as space, moisture, or fertility. Avoid the large ears on stalks standing singly with an unusual amount of space around them. Preference should be given the plants that have produced most heavily in competition with a full stand of less productive plants.

Late-maturing plants with ears which are heavy because of an excessive amount of sap should be ignored. Sappiness greatly increases the weight and is likely to destroy the quality.

The tendency for corn to produce suckers is hereditary. Other things being equal, seed should be taken from stalks that have no suckers.

The same day seed corn is gathered the husked ears should be put in a dry place where there is free circulation of air, and placed in such a manner that the ears do not touch each other. This is the only safe procedure. The writer has repeatedly seen good seed ruined because it was thought to be already dry enough when gathered and that the precaution mentioned above was unnecessary.

Many farmers believe that their autumns are so dry that such care is superfluous. Seed corn in every locality gathered at ripening time will be benefited by drying as suggested. If left in the husk long after ripening it may sprout or mildew during warm, wet weather or become infested with weevils.

The best possible treatment immediately after gathering is shown in figure. Binder twine will support 15 or 20 ears on a string, arranged in the manner illustrated. Ordinarily the best place to hang these strings of ears is in an open shed or loft.

If you have ever found yourself compelled to plant corn that was not fit for seed, do not be caught that way again. It is too discouraging to begin the season with poor prospects of a good crop. Get your seed at ripening time when the best quality is most plentiful. Get an abundance, enough for planting again what the high water may destroy and supply for

some farmer who may move into your community or for a neighbor who could not select his seed corn at the proper time.

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Care for each living kernel from the time it ripens until it is planted in a manner that will enable it to develop into a thrifty plant and produce one or more large ears. Do not expect germination tests made in the spring to restore vigor that proper gathering, drying, and storing would have retained.

Shell your seed carefully by hand.

## NORTH DAKOTA OATS GOOD YIELDER

The United States Department of Agriculture has been conducting trials in the best methods of growing oats in the Great Plains Area, which includes most of North Dakota, Montana, Wyoming, Colorado, South Dakota, Nebraska, Kansas, Oklahoma, New Mexico and Texas. The North Dakota Experiment Station co-operates with the U. S. Department of Agriculture at the North Dakota Sub-Stations.

The results of the oat investigations are given in Bulletin No. 218, U. S. Dept. of Agriculture, Bureau of Plant Industry. The yields secured on spring plowing were: Williston, N. D. Sub-Station, 36.2 bushels; Dickinson, N. D. Sub-Station, 36.9; Edgeley, N. D. Sub-Station, 31.4; Hettinger, N. D. Sub-Station, 32; Judith Basin, Mont., 51.2; Huntley, Mont., 49.2; Belle Fourche, S. D., 18; Scottsbluff, Neb., 22.2; North Platte, Neb., 18.5; Akron, Colo., 23.9; Hays, Kan., 17.6; Garden City, Kan., 6; Dalhart, Tex., 3.5; Amarillo, Tex., 15.1 bushels.

On disc'd corn land the yields of oats were: Williston, N. D. Sub-Station, 37.9 bushels; Dickinson, N. D. Sub-Station, 47.5; Edgeley, N. D. Sub-Station, 33.5; Hettinger, N. D. Sub-Station, 35.1; Judith Basin, Mont., 53.3; Huntley, Mont., 53; Belle Fourche, S. D., 21.9; Scottsbluff, Neb., 26.3; North Platte, Neb., 17.9; Akron, Colo., 20.5; Hays, Kan., 20.7; Garden City, Kan., 8.8; Dalhart, Tex., 4; Amarillo, Tex., 15.8.

The oats were grown at a profit on the spring plowing at all of the North Dakota stations, at the two Montana Stations, at Akron, Colo., and Scottsbluff, Neb. At the other stations the Oats were raised at a loss.

Somewhat larger yields were secured on the summer fallow, but the greatest profit was secured on the

corn land disc'd. The average profit per acre in growing oats on corn land at the four North Dakota Sub-Stations was \$7.05, while on summer fallow it was \$1.42 per acre; on fall plowing, \$2.91 per acre and on spring plowing \$5.86 per acre. The yields on spring and fall plowing are much the same, except at Hettinger where spring plowing went 32 bushels per acre against 22.8 bushels on the fall plowing. This largely accounts for the profits per acre being so much greater on the spring plowing, as compared to fall-plowing.

The bulletin brings out the fact that North Dakota ranks high among the states in the Great Plains Area in oat production and that the most profitable way to grow them is on corn ground.

## WAYS YOUR EXPERIMENT STATION MAY HELP YOU

Mr. Farmer, are you taking advantage of the experiment station in your state. If not, you are losing valuable information which is compiled for your benefit.

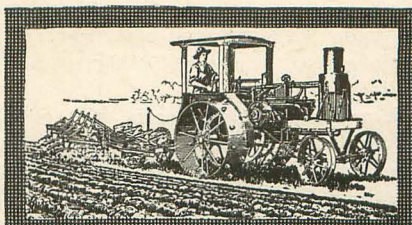
Practical farm work is being done continually at the various experiment stations of the country and the results are recorded, and bulletins on these experiments are to be had free.

Even the oldest farmer is certain to encounter some puzzling problems, and by writing to the experiment station he may have them solved for him.

The state carries on experiments for the benefit of the farmers and those in charge of the work are only too willing to give out any information that is wanted.

A trip to the experiment station will be well worth your while, as you

will have a chance to see the vast and valuable work carried on there and



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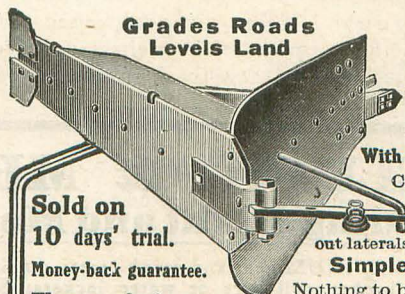
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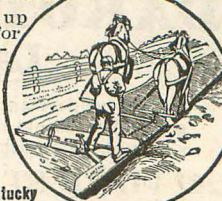
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Simple—Practical



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come to realize what can be accomplished.

Not only crop raising is carried on, but experiments in feeding livestock are being made from time to time and the results of these experiments may be interesting.

The successful farmer is willing to learn, and he can find no better place than the agricultural college to get the desired information.

Farming is a business which has advanced with leaps and bounds in the last decade, and much of this improvement is due to the good work accomplished at the experiment stations.

There modern methods are tried out and when they are profitable the farmer is informed. Many old farming ideas have been proven to be of little value by the work carried on at the experiment station.

The state spends money annually to further the interests of the farmer and it is up to him to take advantage of the work carried on for his benefit.—Drovers' Journal, Chicago.

## FIGHTING THE WEEDS ON THE FARM

### I. Plan of Attacking Perennial Weeds

Of the three classes of weeds, annuals, biennials and perennials, the last is the most resistant, and because of their propagation, largely by underground parts as well as by their seeds, it is difficult to eradicate them. Farmers' Bulletin No. 660, "Weeds: How to Control Them," of the U. S. Department of Agriculture, deals not only with perennials, but with annuals and biennials. It points out that it is possible, if a good rotation is followed, to keep the farm almost free from weeds. In regard to preventing perennial weeds from making a top growth the bulletin tells of five ways: clean cultivation; pasturing; growing smother crops; frequent cutting with a hand-hoe, spud or mower, and smothering small patches with building paper or other material.

In the main, cultivation will have to be relied upon to destroy perennials, and it is done either with or without a cultivated crop growing on

the land. Cultivation is especially effective if the field has been planted in check rows, so as to permit the field being worked in two directions. Because the ordinary shovel or tooth cultivators allow many weeds to slip thru unharmed, the sweep or weed-knife type is recommended. These types of cultivator skim along under the surface of the soil and cut off all weed stems.

Most well established perennials will continue to send up their tops after cultivation stops, no matter how thoroly they have been cut down during the period of cultivation. This situation is met by frequent choppings with a hoe. If the top is thus thoroly kept down for a year it is usually sufficient to eradicate even the worst of our perennials. This plan is especially effective against Canada thistle, bull nettle, and bindweed, or wild morning-glory.

A bare fallow is often used to attack the perennial weed crop. However, it is seldom advisable in fighting weeds to fallow for an entire year as it does not permit the farmer to get any use of his land. A good plan is to use the land during the early part of the season, and to fallow it the latter part. Thus the land may be pastured up to midsummer, or a crop of hay or small grain may be taken off before starting the fallow. This plan has the advantage of starting the work of eradication by fallowing at a period when nearly all weeds are in their most susceptible stage. Under this plan the work of fallowing should be started as soon after harvest as possible. The land is plowed and then harrowed or disked at frequent intervals during the remainder of the season to prevent top growth. Ordinarily shallow plowing is best in fallowing for weed control, as this keeps the mass of weed roots at or near the surface where they will be more easily dried out by the sun. Under this plan the greater part of the eradication is done by large implements and without the hindrance of cultivated crops. Furthermore it is done in the time of year when the farmer is ordinarily not pressed with other work. It is quite successful against the weedy grasses such all

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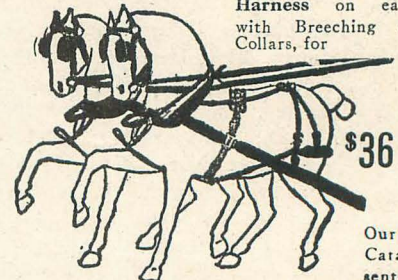
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FARGO, NORTH DAKOTA



Johnson grass, Bermuda grass, and quack grass.

As smother crops, those most commonly used are alfalfa, buckwheat, soy beans, millet, sorghum, and bur clover. Alfalfa, where it succeeds well, is the most effective smother crop, largely because it combines frequent clipping with the smothering effect. Closely allied with the smother crops for keeping down perennials is mowing or cutting, in use on pastures, roadsides and other uncultivated places. Pasturing with sheep, hogs, or goats is of some value in eliminating the perennials and has been used to great advantage in getting rid of such weeds as bindweed, or wild morning-glory. While smother crops, pasturing and mowing may seldom be relied upon to completely eradicate perennial weeds they make much easier the work of weed eradication by cultivation that should follow.

Really as important as the principles of weed elimination, is the man behind them. Clearing a farm of weeds, especially perennials, is no easy task, requiring a systematic plan of attack carried thru to a finish.

#### WHAT IS A WEED?

The author of Farmers' Bulletin No. 6601 in discussing a definition of a weed, says: "A weed has been defined as a plant out of place. This definition is not entirely satisfactory, for two reasons: (1) Because a plant may be out of place and still not be a weed in the popular sense, as rye growing in a wheat field or Kentucky bluegrass in an alfalfa field, and (2) because a plant may not be out of place and still be a weed in popular language, as is described in a subsequent section of this bulletin on the good

points about weeds. In reality a weed is a wild plant that has the habit of intruding where not wanted."

The old definition by which a weed was called a plant out of place, while a very catchy phrase, does not clearly represent usage. The hundreds of wild plants which inhabit a field which is not planted to crops are in common usage called weeds; yet the vast majority of these plants are decidedly in place and are serving a useful purpose thru adding organic matter to a impoverished soil. While ordinarily all these benefits may be realized thru proper rotations, in the absence of the practice of such rotations these wild plants serve a useful purpose, and are "in place," yet usage which invariably determines a definition decrees that they are weeds. They are weeds thru the fact that they are wild and have the habit of intruding where not wanted, even tho they may at some time serve a useful purpose.

#### RATS

H. D. Swarts of Scranton, Pa., has invented a Rat Catcher that caught over 100 rats in one month in one establishment. See his ad in this issue.

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We are giving Ropp's New Calculator FREE to every farmer or land owner who has not yet sent for a copy. Ropp's Calculator should be in the hands of every farmer. It will instantly give the correct answer to any business problem that can be settled by arithmetic. We will also send you our free illustrated catalog on

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We are in the market for North Dakota grown **TIMOTHY CLOVER, ALFALFA, BROMUS** and **MILLET** of all varieties.

Send us samples of any high grade grass seed or seed grain you have for sale, and we will make bid on same F. O. B. your station. **WRITE US TODAY.**

**FARGO SEED HOUSE**

**Fargo,**

**North Dakota**

## FARGO FOUNDRY CO., Fargo, N. D.

**The Largest Foundry Machine Shop and Boiler Shop in the Northwest. A large stock of Structural Steel and Iron always on hand. Full Line of Blacksmith Tools for Farm use. The Biggest plant in the Biggest Little City in the world.**

**We make a specialty of modern Fire Escapes. Best Tools and Skilled Workmen is the secret of our success. While in our city call and see us and judge for Yourselfes.**

**Oxy-Acetylene Welding in connection.**

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# North Dakota Farmer

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Insect pests.**

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Be optimistic. It doesn't pay to be  
a grouch.

As the possibilities of an immense  
yield of wheat go up, the price of  
wheat goes down.

Burning straw is giving back to the  
air what it does not need and robbing  
the soil of what it should have.

Farmers owe it to themselves to get  
the most they can out of the soil; to  
put the most they can back into the  
soil, and to get the most they can out  
of life.

"If at first you don't succeed" start  
a correspondence school and teach  
others at so much per teach how to  
succeed in the business in which you  
failed.

Plow deep and the earlier the bet-  
ter. The present bumper crop has  
drawn heavily upon the available plant  
food in the soil, and sun, air and  
moisture will get the soil ready for  
the 1916 crop if given a fair chance.

If the dockage that farmers not on-  
ly give away this year, and pay freight  
on as well to get it out of the coun-  
try, were fed to livestock it would net  
them several million dollars profit.  
Better still, grow grain instead of  
dockage.

A gasoline engine that costs, com-  
paratively, but a trifle will save many  
a backache and do more and better  
work than human muscles can per-

form. Better spend a little money  
now and save the back for the pleas-  
ure one gets out of it during his de-  
clining years.

"Townsmen seem to think some-  
times that farm bred folks need a lot  
of uplifting, but farmers do not take  
to uplifting worth a cent. The as-  
sumption that any other class can up-  
lift them involves two things; first,  
that they need uplift, and second, that  
the proposed uplifters can uplift  
them."

The season of 1915 has been er-  
ratic. No use for North Dakotans to  
complain, however, for in spite of it  
the harvest on the whole, is a boun-  
teous one. The conditions in other  
states, especially east and south, were  
far worse. Too much rainfall in many  
states ruined millions of dollars' worth  
and in many instances destroyed other  
property.

For the country-bred lad who is too  
busy with home duties to take a  
graduate course of study in the Agri-  
cultural College, and who sensibly in-  
tends to follow farming for a liveli-  
hood, the Farm Husbandry course of  
study should appeal to him. This  
course of study can be completed in  
three years without materially inter-  
fering with the work on the farm.

A given sum of money must be ex-  
pended for penal and charitable insti-  
tutions and for education. What is  
economized in education, however, is  
more than made up in the way of  
increased expenditures for ministering  
to the needs of the insane and crim-  
inal classes. It pays, therefore, to  
educate, not only for intellectual im-  
provement, but to live—soberly, hon-  
estly, and for a useful purpose.

When a purely technical training is  
advocated for farm bred boys, it is  
equivalent to the assumption that  
their vocation is subordinate to the  
professions, such as law, medicine,  
and business; moreover, that the real  
enjoyment of culture is not for them.  
Their lot is to produce, pure and  
simple.

No greater enemy of real democracy  
could be devised. It is equivalent to  
saying that education in its highest  
sense and agriculture are incompatible.  
This fallacy leads naturally to class  
distinctions and is utterly repugnant  
to every principle of social and po-  
litical democracy. What the country  
wants is more political and social

leaders representative of the common  
people instead of so many represen-  
tatives of the corporations and a self-  
constituted aristocracy.

All seed potatoes should be treated  
with formaldehyde solution before  
planting. Otherwise there is danger  
of producing scabby tubers. One  
pound of formaldehyde to 45 gallons  
of water and soaked one hour.

Biddy, the American hen, is last in  
the country's thought and last to be  
given care or attention by the average  
farmer. Nevertheless, when it comes  
to performance the biddies of the na-  
tion pour more actual wealth into the  
American purse, and with less sacrifice  
on the part of husbandmen, than any  
other single farm crop. The American  
hen is an incident, on the average  
farm, yet a mighty profitable incident.  
With proper care the poultry business  
could be doubled in valued. The  
American hen can easily be persuaded  
to coin more wealth than all the gold  
mines and wheat fields of the country,  
and with less risk or worry or work.

The North Dakota Agricultural  
College is doing a good work in giving  
encouragement to those things that  
tend to make rural life more attrac-  
tive and satisfying. There is much of  
a very practical character, not found  
in text books, however, that the stu-  
dent can absorb while in college and  
carry back with him to his home com-  
munity that will make life there more  
worth the living. In fact the farm  
offers the finest of opportunities for  
building a comfortable and interesting  
home and the rural community offers  
a better opportunity than the city for  
safe and sane amusements and other  
desirable forms of recreation. It is  
simply a matter of knowing how and  
then going ahead and doing it.

Automobiles for distributing mail in  
rural communities will be put in oper-  
ation August 2, according to an an-  
nouncement made by the Postmaster  
General. He has signed orders author-  
izing the operation of 105 machines on  
that date. Preparations are being  
made by the department to install  
automobiles for rural free delivery  
wherever the roads will permit. Of  
the routes selected to date for auto-  
mobile mail delivery, 44 are in Okla-  
homa, 28 in Georgia, nineteen in Cali-  
fornia, 8 in Texas, 3 in Florida, 2 in  
Pennsylvania and 1 in Louisiana.  
These aggregate 5,500 miles of post  
roads and are the first chosen for the  
inauguration of the new delivery sys-  
tem.



## Pure Food Advertisers

The products advertised below are in compliance with the pure food law of North Dakota and are of the highest grade. ASK YOUR GROCER FOR THEM.



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Great!"**

The world-old ambition of woman is to please man. No other line of food-products is so certain to please him as

### BLUE BIRD Canned Goods

This brand of EXTRA-standard foods is good enough for anybody—and the cost is low enough for everybody.

The  
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line  
on a  
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shelves  
adds  
class  
to his  
store



**STONE-ORDEAN-  
WELLS COMPANY**  
DULUTH and Branches

**Our Candies  
Are Pure**

**Chaney-Everhart Co.**  
Fargo, N. Dak.

"BUY"

### HOME BRAND

Pure Food Products

"ECONOMY" "SATISFACTION"

**Griggs, Cooper & Co.**

MANUFACTURING WHOLESALE GROCERS

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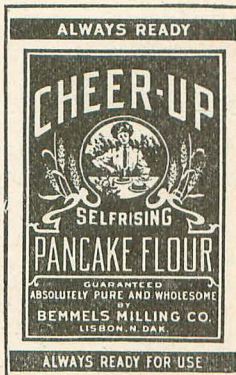
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Considers health his greatest asset and is always interested in pure foods.

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Sterilized  
BREAKFAST FOOD

are made in our sanitary mill from selected wheat in North Dakota and packed in air-tight cartons. Order a package from your grocer to-day and you will be pleased with these economical and healthful foods.  
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## Eat North Dakota Sweet Corn

**Sanitary**

PACKED BY  
ONLY  
FACTORY OF  
ITS KIND IN  
THE STATE.  
SEALED IN  
SANITARY  
CANS AT  
OUR  
MODERN  
THREE-  
STORY  
FACTORY



**Delicious**

NORTH  
DAKOTA  
CORN  
EXCELS IN  
SWEETNESS.  
ASK YOUR  
GROCER  
FOR OUR  
BRAND.  
WRITE FOR  
PARTICU-  
LARS

**Shyenenne Valley Canning Co.** - **Lisbon, N. D.**



# Livestock Department

## FARM AND STOCK NOTES N. J. Shepherd

As the feed is, the meat is.

Ripen cream uniformly, souring is not ripening.

Wasteful feeding increases the cost of the animal.

Kind treatment and comfortable shelter lessens the feed bills.

Weeding as applied to dairying means getting rid of the unprofitable cows.

The richest part of any manure is that which water will wash out.

It is the quiet satisfied hog, that brings the most money to the owner.

The breed adapted to the object sought will give better results and at a lower cost proportionately.

To utilize all food products to the best advantage requires a variety of stock on the farm.

It is the quality of your flock more than its size upon which your profits will depend.

Good food and shelter pay well in any case, but always best when given to the best stock.

With hogs, especially, one of the parents should be fully developed to give reasonable assurance of the best results.

The superior cow in the dairy is the one that gives the most profit from a given quantity of feed.

Under present conditions improved stock can be purchased and the work of others secured cheaper than you can do the same work yourself.

When the pigs get to eating fairly well be careful to increase the feed as gradually as the pigs' power of assimilation increases.

An active hog will naturally make more muscle and make it faster than an inactive or sluggish one, while the active hog is healthier and its meat is better.

Men who are governed by prices wholly in their hog-growing seldom find it profitable. The same may be said of men who are constantly changing from one breed to another.

Not once can the dairyman allow any carelessness in any one particular in supplying his customers. The butter must be first class, nicely put up and promptly delivered when wanted.

The man who wants a cheap article, and can get it from a herd of a reputable breeder is the very man to make the most noise when the cheap purchase proves to be a failure.

The sheep that go into winter quarters in poor condition are under a disadvantage all thru the cold weather. So far as can be done they should be put in a good condition in the fall.

The less wind and cold that comes into the stables, the less food required. Animal heat must be provided by feeding the stock liberally, but the greater the exposure, the greater the loss of animal heat.

With all animals selected for breeding constitutional vigor, which stands first in order of merit, must first be looked for. This can be achieved and maintained only by mating animals that have no hereditary diseases or constitutional malformities.

When many want to sell is a good time to buy and when many want to buy is a good time to sell; for usually many sellers make low prices, followed in due season by small supply and good prices; and many buyers make good prices followed in due season by large supply and low prices.

The business of the farmer is to combine his capital and labor in such a manner that the two together may produce the best results. He does not look for his profit solely from the earnings of his capital nor from the wages of his labor, but rather from the combination.

The results stock raisers or feeders may obtain do not depend so much on breed as on the management of the business. A man may have the best kind of an animal to feed and yet the beef or pork he produces may cost him more than he can get for it in market. Under management we must include all the details that enter into the operations of keeping the stock comfortable, in feeding so that it develops its form rapidly and soundly and as soon as mature to prepare it for market. In breeding the females at the most advantageous time of the year, in supplying to the young the conditions that will secure a good start, in avoiding arrests of growth between the start and the block, in selecting the best and most economical rations for the purpose intended, and in the selection, preparation and proper curing of the food.

## QUERY

I have a fresh heifer cow, whose bag is diseased or out of order, so

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Small advertisements will be classified under appropriate headings at the low price of one cent a word for each insertion. Cash must accompany all orders. Each initial or number must count as one word. TRY IT HERE.

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## DUROC JERSEY SPRING PIGS

Buy your new stock now while the price and express will be low. First class stock from prize winning sires at reasonable prices. Unrelated pairs and trios a specialty. New stock for old customers.

**Roy W. Jacobs, : Wadena, Minn.**

100 Holstein Grade Heifers and Cows. Splendid cattle at right price. Must be seen to appreciate. In writing state ages and number wanted. **Paul E. Johnson, South St. Paul**

**FOR SALE**—Improved Chester White Pigs from April litter, either sex; pedigree furnished. **John F. Zimmerman, Davenport, N. D., Route 2.**

**FOR SALE.** Choice Chester White Boars and Gilts. From Prize-winning stock. **W. I. Grout, Abercrombie, N. Dak.**

**FOR SALE:** Chester White Gilts Bred to Dakota's Pride, a son of Sweepstakes No. 28006, the hog that weighed 1260 pounds. Also Pigs at weaning time.

**THE PRATT FARM**  
**Geo. A. Pratt, Prop. : Cooperstown, N. D.**

**For Sale:** Poland China Spring Pig Boars, S. C. White Leghorn Cockerels. Grimm Alfalfa Timothy and Clover Seeds. Catalog Free. **J. W. BECKMAN, COKATO, MINN.**

**Red Polled.** If you are looking for choice bulls all ages, write, **Howard H. Capener, Erie, N. D.**

**Pure bred Percheron Horses and Shorthorn Cattle** for sale. **Nels Knutson & Sons, R. 1, Fullerton, N. D.**

**THE PLEASANT GROVE FARM** at Holmes, Grand Forks County, sells registered Shropshire and Oxford Rams and Ewes; also Polled Durham Bull Calves. **R. E. Strutz, Bismarck, North Dakota.**

**FOR SALE.** Two Holstein Bull Calves, nicely marked and fine animals; Ages three and four months. Sired by my herd Bull Sir Albino Beets Segis No. 116611. **Wm. Pewe, McHenry, North Dakota, R. R. 1.**

**HIGH GRADE GUERNSEY CALVES**  
From our dairy herd, either sex, for sale. Prices ranging from \$10.00 up, according to age.

**RIVERVIEW FARM**  
**Stern Bros., Prop. : Frank Lamb, Mgr.**  
**R. R. 2, Fargo, : North Dakota**

**Meadowlawn Farm.** The largest breeders in North Dakota. Percheron Horses, Shorthorn Cattle, and Berkshire Hogs. Where quality counts. Address: **A. H. WHITE, : Kramer, N. D.**

**Choice Poland China Hogs** always on hand Bred Gilts all sold, Register now for spring pigs, either sex; prices right. **Thos. Forbes, Petersburg, N. D.**

## ENVILLA STOCK FARM

Envilla Stock Farm, Cogswell, N. D. will quote you special prices on Angus and Holstein Cattle, Shetland Ponies, Duroc Jersey Hogs, Wolf Hounds, Collies, Rat, Bird Dogs and other breeds, Angora Cats. All varieties of chickens turkeys, geese, ducks, guineas, pheasants, rabbits ferrets. Pets. Live Foxes, Skunks, Mink and Badgers.

## Bixby's Red Polls

of A. R. Breeding

My herd bull J. D. Merryweather No. 24396 is from 1400-pound cows and is getting the size in my herd. His dam is a full sister to the World's Champion Two-Year-Old heifer. His first three dams average close to 400 pounds butterfat in one year.

**J. S. BIXBY, : : LISBON, N. DAK.**



that I have to let the calf suck her. Would she be likely to be all right next time? Is it advisable to raise the calf, or would she be likely to be affected the same way?

Is there any advantage to soak ground barley for hogs?

G. M. Donnybrook, N. D.

Your inquiry does not permit us to form a definite opinion relative to the nature of your case. If the affection of the udder is in the nature of garget, the chances are very much that the affected quarter is permanently destroyed. If it is only a catarrhal condition, we believe that there is a good prospect of recovery and of the animal being all right after her next calf.

With regard to soaking ground barley for hogs: Experiments made years ago at the Maine Experiment Station, also at the Kansas Station, gave better results for the dry feed than for the soaked feed and for the dry feed than for the cooked feed.

## THE SILO

Charles Cristadoro

What is a silo? Why, call it a cow's refrigerator, pantry, "grub box," so to speak, for keeping green and fresh food continuously fresh and green—or, on a human plane, keeping one's meat fresh and ready for use daily instead of dried and hung in the lilt.

The silo means the difference between sun-cured, dry alfalfa, corn-stalks, sorghum, white clover, cow-peas, kaffir corn, etc., etc., and the green fodder as succulent as if it were mantling the ground and was waiting to be harvested.

Credit, J. P. Morgan saw, was worth more than money, in the eyes of the banker. A slippery depositor, even with a good deposit to his credit, might have considerable trouble in getting a note discounted, where a man, much less apparently financially reliable, but with a high moral credit, would be granted a discount at once. One was a hazardous risk, the other a risk the bank was willing to take.

A farmer with dairy cows and a silo, along rural credit lines, is regarded as the best kind of a farmer risk, for there is no higher grade of remunerative farming than one involving the growing of one's own feed, storing it in a silo and selling that siloed feed in the form of milk.

Years ago the silo was regarded with suspicion by the men who manufactured condensed milk, but that prejudice has been wiped out.

If my memory serves me aright, Wisconsin is the gold mine dairying state of the Union. And more siloes are going in yearly. The bankers of Oklahoma who loaned the dry-farmer money did so under the proviso that he spent some of the loan on growing kaffir corn and stock. Kaffir corn was a sure crop and so was beef or milk, and the banker knew what it meant towards the soil fertility upkeep to stock and feed it on home grown produce—out of a silo.

So also is the day coming as we near a solution of the rural credits problem when no loan will be made to a farmer who keeps neither stock nor a well filled silo on his premises. The all-grain farmer will be regarded with suspicion, considered to be a miner of his land, who, putting nothing back allows the soil fertility problem to solve itself, which it will not do.

In the early days of Minneapolis, when a man came into a bank for a discount they did not refer to Dunn's or Bradstreet's, unknown then; they scanned his coat collar for saw dust and his hair for flour mill dust—and finding same the man's credit was established. The lumber mill and the flour mill with cheap Mississippi river power laid the cornerstones of Minneapolis' prosperity.

And so with the silo and the dairy cow, the farmer harboring same can always command credit, for he is making an investment of his farm, improving it from month to month, and not running it as a mine.

To go into the reasons for a silo would be as to expounding the obvious, even so when practical farmers regard silage as cheaper than

pasture. So far as the cow is concerned, it means green corn stalks, etc., all thru the year, and whether a cow is fed on dry hay or corn stalks or from a silo, on green palatable fodder, means a difference in the weight of

Originators of the Famous O. I. C. Swine 1863

**No Cholera, Foot and Mouth or any other contagious Disease in our locality for over 50 Years**

Why lose profit breeding and feeding scrub hogs?

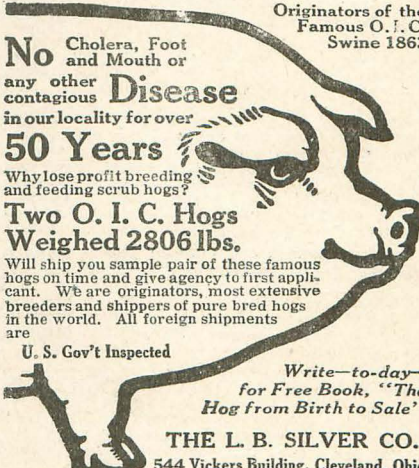
**Two O. I. C. Hogs Weighed 2806 lbs.**

Will ship you sample pair of these famous hogs on time and give agency to first applicant. We are originators, most extensive breeders and shippers of pure bred hogs in the world. All foreign shipments are

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Write—to-day—for Free Book, "The Hog from Birth to Sale"

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## PRAIRIE DELL STOCK FARM, GOLDEN MODEL DUROCS

The Prairie Stock Farm offers some of the best bred pigs in the state, sired by the following boars: Dakota Model and Golden Chief, out of shows by the following noted boars: Grand Champion Chief Col. International Grand Champion Volunteer, Dakota Model, and Golden Chief, and other good boars. Dakota Model was one of the largest boars in the state for his age. He was sired by Golden Model XX, a first prize hog and he by Golden Model 2nd. Dakota Model's dam was a half sister to the twice grand champion Crimson Beauty that sold at public auction for \$610.00. Golden Chief is an extra large hog. He was sired by Col. Chief 2nd, first prize at Minnesota and South Dakota state fairs, and he was a litter sister to the Junior Champion boar at South Dakota state fair. Choice pigs of both sets. Sows bred or open. I can sell unrelated pigs. Ship via Soo or Great Northern.

Maurice H. Bliss, — Genesee, N. Dak.

**HOLSTEINS.** Beautifully Marked Holstein heifer and male calves, 15-16ths pure, 4 to 6 weeks old, \$20.00 each, crated for shipment anywhere. All from mature dams and heavy milkers, guaranteed. One ear heifers a year old, \$45.00. Write or send order to Edgewood Farm, R. 10, Whitewater, Wis.

**DUROC JERSEYS** Gifts out of such sows as Golden Model Queen 6th, Model Beauty and other sows as well bred as could be bought at the sales last winter. Write H. N. HOYME, Jasper, Minn.

**HOLSTEIN** Cows, Heifers and Young Bulls. All ages. Write Envalla Stock Farm, Cogswell, North Dakota.

## Lyndale Stock Farm

Breeders of Registered Red Polled Cattle, and Big Type Poland China Hogs. Some good bull calves for sale. Also have 75 March and April 1st pigs now ready to ship. Mostly all sired by a "Peter Mouw" bred boar.

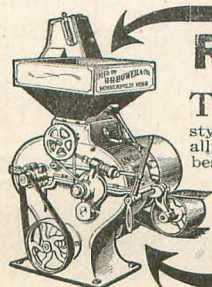
J. E. BASS & SONS, Props.  
Tolley, North Dakota

20 BULLS AT \$150.00 EACH. For quick sale and make room for young calves, we are offering 20 GUERNSEY and RED POLLED bulls o. A. R. breeding for \$150.00 each. Write for sales list at once. Jean Du Luth FARM, Duluth, Minn.

## Big Type Poland Chinas

With quality; 100 to select from. Can furnish pairs not related, sired by four leading herd boars in the 1000-lb. class, Mouw's Jumbo 3rd, Dignans Chief, Baron and Miller's Big Chief. We are booking orders for Gilts to be bred for Spring litters. Prices reasonable. Pedigrees furnished.

J. A. Dignan  
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## ROLLER FEED MILLS

GRIND A WAGON LOAD OF FEED FOR 10 CENTS.

THIS is the Famous Howell Roller Mill you have heard so much talk about. The new improved mill for the scientific grinding of grain. Old style Burr and Stone Mills are out of date. Thousands of them are being annually replaced by the Famous Howell Roller Mills. Grinds twice as fast as the best burr mill made. Does not heat the feed. Grinds Graham and Rye flour as well as feed. Has big capacity. Requires little power. No burrs or stones to wear out. Guaranteed to last a life time. Made in 13 sizes suitable for any size engine. Save one-half your time, gasoline and money by using a Howell Roller Mill. Write for catalog D.

R. R. HOWELL & CO., Mfrs., Minneapolis, Minn.



## MISCELLANEOUS

## To Exchange For North Dakota Farm

Eighty acres of beautiful waterfront on famous Puget Sound, State of Washington. A mile of finest shore front. Midway between Tacoma and Olympia. View of all the Mountains. Good steamboat service. Unsurpassed climate. Good land. Ten acres cleared. Young orchard of 650 fruit trees. Large modern poultry buildings. Small, but substantial house of five rooms, etc., new barn 50x60 with shed extension, smaller buildings, etc. Delightful place to live. No finer investment property. Property recently appraised at \$15,000. There is \$4,000 borrowed on it. Property will soon be ready to cut up into waterfront lots. What have you to offer? Address: Washington, care of North Dakota Farmer, Lisbon, North Dakota.

**WANTED:** Information regarding good farm or unimproved land for sale. R. G. List, Minneapolis, Minn.

**LEARN TO SPEAK IN PUBLIC.** We train men and women to be good public speakers. Money, position and prominence to be gained thru good platform work. Total cost is only \$5.00. We teach other things—send for outline. Prin. W. C. Moore, New Egypt, N. J.

**WANTED.** Live Foxes, Skunks, Mink and Badgers, any time. Envilla Stock Farm, . . . Cogswell, N. D.

**BARGAINS! BARGAINS!** Send for free magazine. 1200 bargains. Farm lands, business chances, any kind, anywhere. Our services free to buyers. Western Sales Agency, Minneapolis, Minn.

**FOR SALE: 3 H. P. Ferro 2-Cycle Stationary Engine.** Has been completely overhauled, after being used for light work and replaced by electric motor. Just the power for driving machinery for lighting, grinding, separating, washing, pumping, etc. Complete with Coil, Battery, Pump, Pulley, Carburetor, Gasoline Tank, Exhaust Pipe, Foundation, etc., ready to run. Cost new \$80.00; if taken at once \$30. Crocker Bros., Lisbon, North Dakota.

**Snap for Renter.** Three hundred-acre farm, \$2500. Eighty acres under cultivation; one hundred fifty tillable, balance pasture. Will sell stock, implements and crop at reasonable price. Plenty of coal and water on place. Plenty of wood and free range near-by. Good location for stock ranch. Adam Balakavage, Wibaux, Mont.

**WANTED** to hear from owner of good farm for sale. Send cash price and description. D. F. Bush, Minneapolis, Minn.

**POWER FARMING.** The magazine of farming with mechanical power. Send 10 cents for three months' subscription. Power Farming, Box C, St. Joseph, Mich.


**Agents Wanted** to sell our beautiful Art Pictures. They sell everywhere, in farm or city homes, at 25 cents up. Big profits. Beautiful sample, (size 16x20) and agent's terms, only 15 cents, post paid. Order at once and be the first in your territory. The Art Shop, Dept. A, Hendrum, Minn.

## Auctioneering

COL. H. A. KINNEY

Real Estate and Registered Stock Specialist—22 years experience. Write for dates and terms. Breeder and shipper of Chester White hogs. Larger blood lines for 1915. Milnor, . . . NORTH DAKOTA

**DAD'S ELECTRIC LANTERN**  
TRADEMARK  
300 FT. of POWERFUL ILLUMINATING BRILLIANCE  
IT'S A DANDY HANDY LANTERN—ASK TO SEE IT—FIRELESS—EVER-READY  
PRACTICAL FOR ALL LANTERN USES  
LIGHTS WITH ANY 6-INCH SIZE STANDARD DRY CELL BATTERY  
AT ALL DEALERS EVERYWHERE—TRY IT—BUY IT  
HYTES FACTORIES, 5062 LITE ST. INDIANAPOLIS, U.S.A.



PRICE \$2  
DELIVERED

the milk pail at milking time or the cream check from the creamery.

The silo and dairy cow is the open sesame prosperity combination for the humid or dry farmer, even, from Maine to California.

### EGG-LAYING CONTEST AT THE PANAMA-PACIFIC INTERNATIONAL EXPOSITION

Single Comb White Leghorns, Ore-gons and Barred Plymouth Rocks, stand one, two, three thus far in the egg-laying contest that commenced November 15, 1914, at the Panama-Pacific International Exposition at San Francisco. Fifty-eight pens, each containing ten hens, are taking part in the contest, which is designed to indicate the relative egg productivity of the various breeds competing. Every individual in each pen must be of the same breed.

The relative standing of the first ten pens on September 1st was as follows:

Standing	Breed	Eggs
1.	White Leghorns (Oregon).....	1434
2.	Ore-gons (Oregon).....	1274
3.	Barred Plymouth Rocks (Ore).....	1227
4.	W. Wyandottes (British Col.).....	1200
5.	White Leghorns (New York).....	1136
6.	W. Wyandottes (British Col.).....	1106
7.	White Leghorns (England).....	1099
8.	Rhode Island Reds (Calif.).....	1073
9.	Barred Plymouth Rocks (Ore).....	1063
10.	W. Leghorns (Washington).....	1054

The Oregon is a new variety, developed by Professor James Dryden, of the Oregon Agricultural College, whose successful experiments in poultry raising have distinguished him in the poultry world. It is a cross between the Single-Comb White Leghorn and the Plymouth Rock.

### A CHEAP PORTABLE GRANARY

Grain storage is necessary on the farm. W. R. Porter, of the North Dakota Experiment Station, states that he has used a 12x16 ft. granary, 8 ft. posts with splendid results. The first one was built on 9 1/4 ft. 4x6 in. sills and are portable. With four horses, when empty, it can be hauled to any place on the farm thus making it possible to thresh directly into it. Mr. Porter states that it has cost him approximately \$75 for the lumber and labor required to erect such a granary. Two men can put one up in a couple of days. The capacity is a little over 1200 bushels of grain, making the first cost, six and one-fourth cents per bushel. The annual expense of such a granary with interest at 6% and de-

preciation 10% is \$12.00 or 1 cent per bushel capacity which is a very low carrying charge for storing grain.

He gives the following details of construction: "Lay down the 9 1/4 ft. 4x6 sills. Nail onto these clear fir flooring. When this is laid toenail 2x4's securely to the sills at the front and rear. On top of these place a 2x4 plate. The studding in the ends should be the right length to extend to the rafters. Place 2 feet apart and nail securely to the sills. 1 one-third pitch gives enough slope to the roof. This makes the peak exactly 12 feet above the floor. For the sides and ends use ordinary drop siding; cedar shingles laid on ordinary sheeting lumber makes a good roof. A door four feet wide and six feet high should be put in each end. The doors can be made out of drop siding. It must be protected from the grain pressure by boards placed across the studding in the inside. One small door should be placed in each end for filling the granary.

### Demands of the American Market

The American markets have their peculiarities, with a more or less slight difference according to location.

It is the American idea that the richest flavored eggs are those enclosed in a brown shell, and the browner the better. Notwithstanding that repeated tests have shown that there is not a particle of difference in flavor between a white-shelled and a dark or brown-shelled egg, nevertheless it is the public demand, and the enterprising poulturer is sure to keep breeds of the American and Asiatic classes to meet that demand.

It is the American idea to have clean-legged fowls, which is the prime reason for the unpopularity of such breeds as the White Wonders and the Sherwoods, both of which have feathered-legs. The only feathered-legged fowls that ever gained any prominence in America are the Brahmas and the Cochins, and at the present day for commercial purposes, the Light Brahma is the only variety that is accepted by the market poulturer.

It is the American idea that squab-broilers should weigh about eight ounces each; broilers from one and one-fourth to two pounds each; spring chickens from two to three pounds each; soft roasters from three to four pounds each; and regular roasting fowls from four to six pounds each.

The American markets demand freshness and cleanliness. They demand plump, attractive looking carcasses. They call for honest dealings. It is no great trick to understand and properly cater to their wants.





## Poultry Department



### THE WAYS OF THE BEGINNER

Michael K. Boyer

As a rule, the beginner starts in poultry culture with great enthusiasm. He carefully looks after the details, he gives the best of attention. In time the enthusiasm in many cases wears off, and he becomes discouraged, but keeping up his faithful work he succeeds. The plant grows; there is an improvement in his stock, and his enthusiasm instead of flagging is increasing.

Two important articles are necessary for success: Capital and Experience. All business requires both capital and trained mind. Some years ago the poultry business was boomed with the false inducement that raising chickens was an occupation that called for very little labor, practically no capital, and a very small amount if any experience. These false inducements were handed out in order to create sales for stock and machinery.

But instead of being that easy occupation, it was found to be one that required brains, energy, and every requisite needed in any other business. He who is easily discouraged, a victim of the "blues," or he who soon tires of the sameness of work, or the close confinement it entails, had better leave poultry culture alone. While it cannot be said that the care of poultry is hard, muscular work, at the same time getting up in the morning and repeating what was done every morning during the week, the working at night when a lantern is necessary, duties to perform on every day, Sundays and holidays included, soon tries the grit, the push, the patience of a man.

But the man who masters all these obstacles and sticks to his business is the man who, as a rule, succeeds. There are times in all enterprises when it looks as if the business would fail, but by pegging away it is soon discovered that only a dark cloud appeared. But at these times the faint-hearted begin to reason that the days for success in this line are gone by. When a man gets to that state of mind that he cannot see a silver lining in the clouds, he is ready to accept the first offer to sell out. In the majority of cases he makes his losses all the greater by selling out way below cost.

The beginner must know that his fowls deserve and must have the best of care. He must give a close

watch to conditions, must provide comfort, cleanliness and plenty of room. Likewise he must study the appetites of his flocks. Both system and regularity are important factors, never forgetting that shiftlessness is costly, and filth is a dangerous stumbling block. The quality and quantity of brain work put into the concern determines the amount of success. "Trained thinking and wise working" is a secret that will bring on success. "Bad luck," is merely another term for bad management. No duty is rightly performed that is done in a mechanical manner. The beginner must stop and think. He must notice the little matters. He must never assume more work than he can accurately perform. He must never overestimate his capacity, and he must never rush to get done. Haste makes waste. Map out a plan and then work by it. Scrub treatment will bring scrub results. The lack of good business sense has been the cause of more failures than has anything else. A man never shirks his duty when he is in dead earnest in his work. Many who have good success with few fowls, fail when they increase their numbers, for the reason that they fail to increase their accommodations and attention accordingly.

### Selecting the Breed

It has been said that it does not matter what breed is selected so long as it is pure in blood. But that is good only as far as it goes. We select the pure breeds for the object at stake. What is the object? Are we going to raise broilers or roasting fowls? Or, are we contemplating an egg farm? Do we intend catering to a winter market in eggs? Or, do we want about an equal quantity of both eggs and meat?

According to our experience, and we have tried nearly all the practical varieties of poultry, there are none that can surpass and few equal the American productions. Breeds may come and breeds may go, but none have stood the test so well as our Plymouth Rocks, Wyandottes, Brahmas and Leghorns. But, it might be said, the Brahmas are English and the Leghorns Italian. It is true they originated in those countries, but the strains we have in this country today are purely American. There is as much difference between the English Light Brahmas and the strain we have in the United States, as there is be-

### BEITH'S WHITE WYANDOTES

Winners at Crookston, St. Paul, Minneapolis and Fargo, N. D. Our birds are bred to lay as well as they are bred to win.

J. C. BEITH

Wheatland, - North Dakota

**BARRED ROCK COCKERELS.** Must sell to make room for younger stock. Have Enoch Peterson strain, bred for egg production, best in the northwest. Cheap for immediate delivery. Mrs. R. C. Burnett, Fargo, N. Dak.

**BOURBON RED TURKEYS,** Unrelated Breeders. Buff Orpingtons, Good Prize Stock. G. H. Johnson, R. 2, Evansville, Minn.

**S. C. W. LEGHORNS.** The Famous Tom Barron's Strain. Cockerels, \$1.50 each; \$7.00 per five. Pullets, \$1.25 each; \$12.50 per dozen.

**ROSE COMB REDS.** Cocks and Cockerels, \$1.50 each. Hens, \$1.00 per dozen. Have a large flock to select from this fall and can fill orders promptly. Joseph Berg, Hendrum, Minn.

**Silver-Laced Wyandottes,** bred for business wide open laced, winter laying large birds. \$1.00 to \$3.00 each. Satisfaction guaranteed. Anthony Elm - - - Lansford, N. D.

**FOR SALE:** 18 varieties of thoroughbred poultry: Cocks and Cockerels; Turkeys; Geese; Pekin, Rouen, Muscovy and Runner Ducks; Pearl and White Guineas; Bantams. Hares; Rabbits; Cavies; Dogs; Fancy Pigeons. Write your wants. D. L. Bruen, Platte Center, Nebr.

**EGGS FOR HATCHING** from choice Silver Lace Wyandottes. \$1.50 for 15 eggs. Mrs. Thomas Brady, Lansford, N. D.

### WHITE HOLLAND TURKEYS & BARRED PLYMOUTH ROCKS

Eggs for hatching from choice matings. Turkey eggs \$3.50 for nine eggs. Rock eggs, pen No. 1, \$2.50 for fifteen eggs. Pen No. 2, \$1.50. Express or parcel post prepaid. Not guaranteed by parcel post.

ROY W. JACOBS, - - WADENA, MINN.

**Breed White Wyandottes.** Eggs for sale from vigorous trap-nested stock. My birds win in show room wherever exhibited. M. C. James, Valley City, N. D.

**For Sale.** Nice Buff Orpington Cockerels at \$1 each. Mrs. John Alexander, Edmunds, N. D.

**White Holland Turkeys, Toulouse Geese and Barred Rock Cockerels.** Gustav Larson : : Northwood, N. D.

**S. & R. C. White Leghorns.** Blue Ribbon and Silver Cup Winners. Cockerels, \$1.50; Eggs, \$1 per 15; \$4 per 100. H. H. Hirschy, Lisbon, N. D.

**S. C. R. I. Reds.** High scoring cockerels. Eggs for hatching in season. Henry Mertens, Grary, N. D.

**White Holland Turkeys, R. C. R. I. Reds.** Stock and Eggs in season. Maurice H. Bliss, Geneseo, N. D.

**White and Columbia Wyandottes, Light Brahmas, and S. C. White Leghorns** Over 30 years a breeder. Stock and eggs for sale. MICHAEL K. BOYER, Box 27, Hammononton, New Jersey.

**PURE BRED S. C. W. Leghorns.** Eggs for Hatching, \$1.00 per 15; \$4.00 per 100; or \$7.00 per 200. T. I. Martinson, Christine, N. Dak.

## B-E-A-L-S'

*Dakota Strain. Bred to Lay and Win*  
**BARRED PLYMOUTH ROCKS**

Won at Fargo Inter-State Fair in hot competition 1st cock; 1st, 2nd, 3rd cockerel; 1st, 2nd, 3rd pullet. At Valley City, 1st, 2nd, 3rd hen. Order choice breeders for delivery later at \$2 per head while they last.

PERCY BEALS : : FARGO, N. D.

## Quality White Rocks

We have as good as grow. You start right with our stock or eggs.

Hatching Eggs now \$1 per setting, \$3 per 50; \$5 per 100. Write today. O. A. Barton, Valley City, N. D.



tween day and night. And the same may be said of the Leghorns—both the Browns and Whites.

Years before the Barred Plymouth Rocks saw the light of day the American Dominiques were the popular fowl, but today they are seldom heard of, having been crowded out by the popularity of the Barred Rock. We cannot see that the poultry world has suffered any by the change, as the Rock is a better sized bird, and we believe equally as good a layer.

In the breeds Wyandotte, Plymouth Rock and Brahma we have a combination of meat fowls of value. The Wyandotte is the leader for the production of broilers and small roasters; the Plymouth Rock for medium sized roasting fowls; and the Brahma for large roasters. Of the three varieties the Brahmas lay the brownest eggs, the Plymouth Rocks next, and the Wyandottes next.

There is but one thing that can be said against the Plymouth Rock as an egg fowl is that it very easily overfattens, and in this it is as bad as the Brahma. The same amount and quality of food that will keep the Wyandotte in a good, thrifty, profitable condition, will overfat a Plymouth Rock or a Brahma. Neither breed can stand the amount of forcing that a Wyandotte can.

For winter egg-production we have found the Brahma the best, Wyandotte next, Plymouth Rock next.

All three breeds are of a quiet disposition, easily contented, and very easily tamed. These are points especially favorable to profit.

Where a man intends running an egg farm, we have found that two breeds are better than one, and our choice for this would be Wyandottes for winter egg-production and Leghorns for summer. The Leghorns would become broody. The Leghorns are better summer layers than any of our American varieties.

#### Growth of Market Poultry

It has been asked, will the fancy eventually be driven to the wall by the progress made in growing market

## Home Club

1 year North Dakota Farmer \$ .50  
1 year Mother's Magazine... 1.50  
1 year Ladies' World..... 1.00  
1 year McCall's Magazine  
(Together with 15c pattern).. .50

Total Value.....\$3.50

Our Price..... **\$1.75**

N. D. FARMER, LISBON, N. D.

poultry? Why should it? We need fanciers—real fanciers. We want men to create breeds and to perfect the old ones. But the speculator or huckster should see his finish. There are entirely too many second-class fellows. The man with a string of breeds is not a fancier; he is a speculator. It would be next to impossible for him to give each of these breeds his best attention. About the first aim of the beginner is to become a fancier. He reads the advertisements of such men as Thompson, and Hawkins, and Felch, and he wants at once to step up to a front seat with them. He imagines that by simply breeding Thompson Barred Plymouth Rocks he can command the same class of trade that Thompson can. Sooner or later, however, he sees his folly, and out drops a man who might have been made a successful market poultryman. These amateur fanciers will often buy culls from a breed well advertised, and then advertise eggs for hatching from So-and-So's strain. Such a man is a worse enemy of the fancier than the man who breeds dunghill fowls.

A wonderful interest has sprung up in poultry matters. Large sums of money are being invested, and poultry farms by the score are started. These new farms are on the lookout for utility stock. The man who can advertise big egg records generally gets the trade. They want carcasses and egg records—business poultry. So the best advice to the beginner is to join the utility ranks and raise the poultry and eggs for market. Then, in after years, he can, if feels so inclined, gradually creep up into the fanciers' fold. It is a step that cannot be hastily taken.

#### OLD ADVICE STILL GOOD

It is indeed interesting to know, in these times of changes and improvements, that the advice given 30 or 40 years ago was generally very sensible, and much of it has not been changed even at the present day. Here are some samples:

"After all said and done, in regard to fattening fowls, it is doubtful whether there is any better food for this purpose than sweet corn meal. Feed it frequently during the day, not less than four or five times, beginning early in the morning and giving the last as near roosting time as possible. Give only as much as the fowls will eat with a relish. Feed it raw, not ground too fine, and moistened with a little water."

"The droppings of the hen roost are amongst the best fertilizers that accumulate on the farm. They are fully equal to the best Peruvian Guano.

Being too powerful to be used alone, they should be composted in the proportion of two parts of good soil or muck to one of the droppings. Thus prepared it will be found almost invaluable for any crop, but especially strawberries. We would therefore ask the farmer who permits his fowls to roost on trees, fences, plow handles, wagons, etc., subjecting them to accident and disease, and of course wasting their valuable droppings, whether it would not be a profitable investment to build a comfortable hen-house? Think the matter over at your leisure."

"Brahmas are hardy, stand the cold weather well, are remarkably exempt from diseases at all ages, are good winter layers, and what is of the utmost importance, their chickens can be raised with a less percentage of loss from sickness or feebleness, than any other blooded breed whatever."

"We are not particular as to breed except that we want large, lively hens. We change cocks every year and look for good sized smart fellows." That paragraph would be contradicted if offered at the present day, when medium-sized hens are advised, and when changing male blood annually might mean ruin.

The late Professor Gowell, of the Maine Experiment Station, considered water one of the greatest "egg foods" that could be given hens. In his classes in the University he urged a constant examination of the drinking fountains, that they not only are filled, but that the water in them is fresh and clean.

Clover is a most valuable poultry food. It supplies the much needed mineral elements (ash) so necessary to the vigor of the new-hatched chick, and that much-desired mineral element must be in the eggs from which the chick is hatched.

It is not advisable to be too enthusiastic in the start. It is apt to breed over-confidence. The beginner in such cases is apt to build air castles in such cases is apt to build air castles, and get to that point when he thinks he "knows it all." A little knowledge is a dangerous thing. It is necessary to have some enthusiasm; all enterprises require it. Unless a heartfelt interest is taken in the work assigned one, he is apt to poorly perform his duties. Helter-skelter methods are disastrous. Every muscle should bend in the proper performance of the work. The man who begins poultry culture with the idea of becoming rich, is very apt to later on sell out at less than cost. The aim must not be too high.



## School and Home



Miss Ura Leader,  
Ruraldale, N. D.  
Dear Miss Leader:

There has been so much written concerning corn judging that it seems hardly necessary to write you about this important phase of your work. In many ways corn offers excellent opportunities for class work. These opportunities should not be overlooked.

The object of judging any product is to determine its fitness for the purpose to which it is to be put. The principal object in judging corn in this state will be to determine its value for seed purposes. Every character which gives an indication toward this fitness must be considered.

On every score card you will notice certain characters are given weights which are intended to indicate the degree of perfection of the sample being judged. Every point or character given on the score card should help determine the value of the sample.

The points found on the score card are self-explanatory. This state needs however to develop a standard of perfection for the different varieties. The standard of perfection should plainly tell us the ideal type of ear. It is necessary to know the ideal type in order to continue the selection from year to year in the same direction. If the selection wobbles from year to year, the type will wobble and no permanent improvement will be effected.

In order to make improvement in the types of corn grown, it is necessary to select toward a definite type all the time. Dent corn for North Dakota should be from 6-8 inches long, about 6 inches in circumference and true to type. Flint corn varies more. According to the variety, 6-9 inches long and 5-6 inches in circumference is a desirable type.

Do not forget that every point on the score card represents some point of utility. There are no fancy points found there. If you do not have score cards, I will be glad to send you a copy. Be sure you use the data gathered in North Dakota. The type of corn grown in some eastern state is not the desirable one for this state.

When you take up the conveniences on the farm, be sure you clearly distinguish between conveniences, necessities and luxuries. By convenience we do not mean something that is nice to have, but that one may just as well get along without; we mean useful and time-saving devices. It means to have the work laid out carefully and methodically. And it suggests having handy, laboring saving devices.

Frequently time and work may be saved by installing some simple convenience or labor-saving device. This does not refer to essential machinery like binders, wagons and mowers. No one could run a farm without the use of such machinery. It is pure nonsense to speak of a plow as a convenience.

Of course it is easier to run a plow with a seat attached than one without a seat. Most farm machinery is devised to eliminate hard work. But these are not the points we think of when conveniences are mentioned.

Conveniences apply to those things which are used most every day during the year. It is easier to pump water than to haul it up with a rope. It is easier and quicker to pipe water

some distance than to carry it by hand.

How many unnecessary steps are taken in going after water, wood, or to do other chores. Why not make an uncritical examination of some of the nearby farmsteads? From instances with which you are familiar, have the pupils determine how much time would be saved in a year providing better arrangements had been made.

Conveniences are not confined to the things outside of the house. Houses are usually poorly designed. Why not look at the kitchen as a work shop and have it just as convenient as any other workshop.

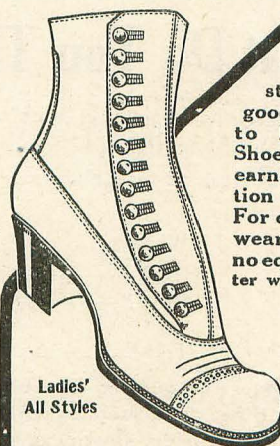
If a blacksmith had to run half a mile for a pail of water to cool off a plow point, then go to some other building to get the hammer, and then go down cellar or up stairs for a little coal, he would not get very far in a day.

You see I want to emphasize the importance of having things conveniently arranged. It is much easier to properly arrange things in the first place than rearrange them after once located. It is for this reason that I would not criticise any particular place. Besides it is safer not to do so.

But the young people may just as well learn these things. No doubt many of them will some day be planning homes for themselves. There is no reason why they should not improve on present conditions.

Sincerely yours,

O. O. CHURCHILL



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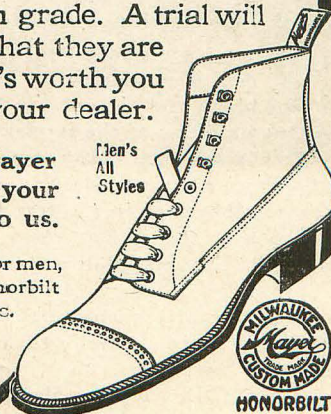
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## A FEW SUGGESTIVE LESSONS

### For Months of October and November

#### No. 1. Weeds

The injury weeds do: They use plant food, take up moisture, make cultivation expensive.

Kinds and habits: Annuals, biennials, perennials.

Methods of combating: Uprooting, cutting off tops to prevent seeding, smothering, selecting clean seed.

Practical exercises: Have the pupils bring to school for study specimens of all weeds that may be found in the gardens, orchard, or fields at this time. Learn to name them and list the names with a brief description in the class notebook. Those that can not be identified should be sent to North Dakota Agricultural College, Agricultural College, N. D., for classification.

Correlations: Language and drawing: Make written descriptions and drawings of the weeds studied. History: Require the pupils to prepare an account covering the following points with reference to the most injurious weeds found in the community: The dates of introduction, the spread, the damage done, and the methods of combating.

#### No. 2. Manure Management

Applying manure to the soil: Methods: Placing in heaps about the field, broadcasting, applying in hill or drill with seed.

Storing manure: Providing shed, packing, applying moisture.

Class assignment: Supplement the lesson with notes from Farmers' Bul. 192.

Practical exercises: (1) Require the members of the class to report the methods employed at their homes in the management of manure. (2) Club members should begin spreading manure on their plats.

Correlations: Arithmetic: Keep a record of the amount and value of manure applied to the soil of garden or field projects.

#### No. 3. Conserving Soil Moisture

How to secure and retain a supply of soil moisture sufficient to produce an abundant crop is one of the important problems of the farmer.

Class assignment: Any good text.

Practical exercises: (1) Perform the exercises suggested in the text in connection with this lesson. Also see exercises in Farmers' Bul. 218.

Correlations: Language: Have pupils take notes in connection with the practical exercises. Write them up in full and copy in the notebook. Arithmetic: Develop problems based

on results of the experiments to determine the weight of water in different areas of soil, taking into account the depth of breaking the land.

#### No. 4. Seed-Corn Selection

Select in the field stalks that have surpassed their neighbors under average conditions as to distance and soil fertility; that are thrifty, of average height, strong, and tapering; that have strong brace roots and an abundance of leaves; that have at least two good ears at a medium height, possessing moderately long shanks, close-fitting husks, and well-covered tips.

Mark ears that are 7 to 9 inches long, with an average circumference three-fourths of the length of the ear; that have medium-sized cobs, straight rows of kernels extending to the tips and butts; and that have long, wedge-shaped, firmly set kernels true to type as to denting and color.

Storing seed: Later, when seed is mature, gather and store out of reach of small animals. If necessary, fumigate for weevils or grain moths.

Class assignment: Any good text. Teachers should supplement the lesson with notes from Farmers' Buls. 313, 415, 537, and 617.

Practical exercises: Teacher should accompany pupils to near-by field and give them practice in selecting proper stalks and marking ears. Club members should select seed for the next crop.

Correlations: Language: Write an account of the field trip. Drawing: Ideal and improper ears, ideal and ill-

shaped grains furnish drawing material. History: Study the development of the corn-club movement. Organize a school club. Get extension literature from the North Dakota Agricultural College, N. D. Arithmetic: Collect community data on increased yields due to seed selection and develop problems adapted to the needs of the pupils.

#### No. 5. Corn Judging

Topics: Object of corn judging, use of score card, selecting good ears, arranging an exhibit.

Class assignment: Supplement the lesson with notes from Farmers' Buls. 415 and 617.

Correlations: Language: Require each corn-club member to submit a written report covering such points as cost of production, kinds of fertilizers, method of applying fertilizers, yields, value, exhibits made, and prizes won. Arithmetic: Select five choice ears and five ordinary ears. Weigh each lot in the ear. How many ears of each are required to produce a bushel of 70 pounds? Shell and weigh each lot. How many ears of each are required to make a bushel of 56 pounds?

#### No. 6. Preparing for Silage

Why silage should be made: Best and cheapest form of succulent food; a very palatable food; a substitute for pastures during winter months.

Silage crops: Corn, cowpeas, soy beans, clover.

Harvesting the crops: Time, equipment.

## What Do You Think of This Land?

The Mohall Security Bank has just sent me returns of this year's crop of N. E.  $\frac{1}{4}$  20-160-84 being Clay Township, Renville Co., North Dakota, rented to Edward Fitzgerald, on my one-third share, he furnishing seed, viz:

Wheat.....	1423 bu.
Oats.....	623 bu.
Barley.....	401 bu.
Total.....	2459 bu.

Besides the quarter the above grain was raised on, I offer for sale S. E.  $\frac{1}{4}$  of Sec. 1 in same township. Also E.  $\frac{1}{2}$  Sec. 27 162-83, being in Hoffman Township, Bottineau Co., and about twelve miles from the farm located in Sec. 1, Clay Township, all tributary to Mohall, the county seat of Renville County.

From the top of one of the elevators at Truro, N. D., being half mile from the quarter I offer for sale in Sec. 1, Clay Township, you can see and count 27 substantially erected grain elevators. I mention this to show that this is a very productive section of country.

The above mentioned descriptions contains one section of land which I offer for sale at \$20,000, on terms. Any parties interested may address

**M. O. HALL, 3320-30th St., San Diego, California.**



Making silage: Cutting, packing, moistening, covering.

Class assignment: Any good text. The teacher should give the class notes from Farmers' Bul. 578 covering the foregoing outline. This lesson is of special importance in stock-raising and dairy sections of North Dakota.

Practical exercises: (1) If there is a silo in the community, take the pupils of the class to visit it. If possible, secure from the owner the following information: Crops used in making silage, the length of the particles of silage, the time of making silage, and the manner of filling the silo. Require the pupils to take notes on the foregoing points. (2) If there is a silo at the home of any member of the class require that pupil to make a written report covering the points mentioned in exercise 1.

Correlations: Language: Require the pupils to copy in their booklets the notes and reports on the foregoing exercises. Arithmetic: (1) One cow consumes the silage from 8 square feet of surface to a depth of 2 inches each day. What should be the diameter of a silo to feed a herd of 10 cows? Fifteen cows? Twenty cows? (2) If the silage is fed an average depth of 2 inches each day, what should be the height of a silo to feed a herd 120 days? One hundred and eighty days? (3) If silage weighs an average of 35 pounds a cubic foot, how many tons in a silo 14 feet in diameter and 30 feet high?

### EFFECTIVE USE OF TREES

Trees are necessary to make a place homelike. Professor C. B. Waldron, of the North Dakota Agricultural College gives the following suggestions and how to plant trees so as to secure the most pleasing and effective results.

"Of the few fundamental principles to be obtained in ornamental planting the one of possibly the greatest importance is that of shelter.

The prime requisite is that our place should look comfortable. It must have an expression of snugness, compactness and homelikeness. The most serious defect that can be ascribed to any place is that of bleakness and loneliness. This can be overcome only by the planting of dense heavy masses of trees and shrubs in such a manner that they will give the place an expression of comfort. A house, however modest, nestled in among trees, especially if they be of natural growth or planted so as to appear so, always appeals to us as being attractive and homelike. We picture the lives of the occupants as being filled with serenity and satisfaction. On the other hand,

a house however pretentious, that is nakedly exposed to the sun and wind, leaves a most unhappy impression upon the beholder. Those who make journeys either for a day's outing or summer vacation instinctively seek secluded places where they may find shelter from the sun and wind. Purely from the ornamental standpoint then, aside from the matter of comfort, the shelter belt becomes one of the most prominent of all of the decorative features of the home.

The character of the shelter belt will depend upon its distance from the house and its relation to the other features of the grounds.

If the matter of driftings snow be taken care of as it should be, by outlying rows of willows or other trees the shelter belt proper can be brought within one hundred feet or even less of the house. In order to make it the most effective it should be placed as close as possible, allowing room for the ordinary activities about the home. The time honored method of planting five or six rows of cottonwoods or box-elders on two or three sides of the grounds will not give the best effect either in the protection obtained or the appearance of the shelter belt itself.

Recognizing the shelter belt as a fundamental feature in the scheme of decoration it should in itself be made as ornamental as possible. The side away from the buildings, as a matter of economy and convenience, can be planted in straight rows. The portion that comes into view should be arranged in natural mass planting so as to produce the rather elusive but none the less real expression of naturalness.

The outer rows of the shelter belt may be made up of dense and quick-growing species like the white willow, or the soft maple. Inside of that two or three rows of shade-loving species like the elm, hackberry, bass-wood, ash, red oak and European larch, will bring about the results desired. It is upon the inside of this that one has the chance to exercise his originality both as to the selection of trees and their arrangement.

In the prairie regions we find that the Black Hills spruce, Colorado blue spruce and bull pine or western, yellow hold their own better than trees from the moister climates. The conifers are more effective when planted in a mass by themselves. They do not blend well with the ordinary types of deciduous trees. A striking exception to this, however, is the native white birch which because of its trim appearance and aristocratic bearing does not suffer by comparison with the most elegant of the coniferous trees.

Toward the front of the yard a larger proportion of shrubs may be used. These not only soften the harsh outlines of the straight rows of trees at the back but because of their low, dense, bushy growth make the shelter belt more effective. The number of shrubs that may be used for this purpose is so great as to make their selection almost embarrassing. Among the most ornamental and enduring are the choke cherry, high bush cranberry, sumach, thorn apple and red dog wood.

If it is desired to add still further to the ornamental features of the shelter belt one may plant any of the ordinary cultivated flowering shrubs in small masses on the more exposed points.

The inside line of the shelter belt should be more or less irregular and yet the irregularity should blend in soft flowing lines.

All of the trees and shrubs should be set closely at the beginning with the idea of thinning them out as they become crowded. We often hesitate to cultivate some of the frailer plants like the lilies because there is not sufficiently good shelter for them. With a protection like the one described one will find numberless nooks and crannies where he can cultivate the more delicate species to his heart's content.

With all the ornamentation that the shelter belt received, however, it should be borne in mind that its chief use as an ornamental factor is the fundamental one at first named. On account of it the whole garden will have an air of quietness, comfort and repose that is the most essential factor in the attractiveness of the home landscape."

### TEN THOUSAND BOY CORN GROWERS IN THE NORTH-WEST

Competition promises to be close and keen at the Boys Corn Show which will be a large and interesting part of the "First National" Corn Show to be held in St. Paul, December, 1915. Upwards of 10,000 boys, under eighteen years of age, living on the farms of the "Zone of Plenty" states of Minnesota, North and South Dakota, Montana, Idaho, Washington and Oregon, are industriously raising corn on plats of ground one acre or more in extent, with a view to winning honor for their localities and themselves by carrying off prizes at their respective County and State Fairs, as well as at the "First National" Corn Show.

Particular interest is being shown by



these boy agriculturists in the "First National" Corn Show competition as it will be the first time in the history of the Northwest when corn raised exclusively by boys thruout the entire Northwest has been gathered together for display purposes. While, owing to differences in climatic and soil conditions in the vast area of territory from which boys will make displays, there will be no general competition between states, each boy will be given an excellent opportunity to win a prize worthy of his greatest efforts. The states named have been divided into territorial districts in each of which the competition will be confined. There are 32 districts in all, in each of which a \$50.00 silver loving cup suitably engraved will be offered for the first prize and a handsome golden bronze loving cup offered for second prize. No entrance fee will be charged to exhibit and admission to the show will be free. Each boy participating in the contest must plant one acre of corn or more. The finest collection of ten ears of any variety grown in each district by a single exhibitor will constitute an exhibit.

The enthusiasm shown by the boy corn growers in the "First National" Corn Show contest indicates that they realize in winning honor for themselves by sending a creditable exhibit of ten ears of corn to this Northwestern Show they will be performing a worth while service for their own locality and their state.

The State Agents of the Boys and Girls Clubs of the United States Department of Agriculture are actively at work interesting the boys of Minnesota, North and South Dakota, Montana, Idaho, Washington and Oregon, in this contest.

Prof. T. A. Erickson, of St. Paul, is actively at work with his 3,000 members in Minnesota.

800 boy farmers in North Dakota are being urged by their State Agent to send a creditable exhibit to the show.

Prof. W. M. Mai, of Brookings, S. D.; Prof. Augusta D. Evans, of Montana; Prof. T. J. Newbill of Pullman, Wash.; Prof. S. L. Griffin of Oregon and Prof. T. N. Potter of Idaho, are all endeavoring to organize the members of their boys and girls clubs, aggregating several thousands, to enter the list for the honor of their communities.

The favorable weather conditions thruout the last part of the Corn growing season, will enable the "First National" Corn Show to produce the most creditable display of corn grown by boys under eighteen years of age in the history of the Northwest. All boy corn growers in each state named are

urged to get in touch with the State Agents of the Boys and Girls Clubs of the Department of Agriculture and secure detailed information regarding this competition.

#### N. P. WONDERS IN GUIDEBOOK. NEW VOLUME ISSUED BY GOVERNMENT RICH IN INFORMATION

Uncle Sam has spent some thousands of dollars preparing a series of transcontinental guide books telling the traveler of many of the wonders of the west which he sees from the car windows and concerning which he asks questions that none of his companions can fully answer. The Northern Pacific guidebook, one of this series, has just been published by the United States geological survey as Bulletin 611, and it is Secretary Lane's hope that this popularly written book may get into the hands of the greatest possible number of travelers. This volume, like the other three of the series, is to be sold by the superintendent of documents, Washington, D. C. at \$1 a copy. The book is in no sense a purely geological publication, altho the geology of the route is described in terms that can be readily understood by the layman. The mountains, plains, river valleys, and rocks that are seen from the car window as apparently unrelated items in the landscape are described as parts of an orderly procession, and the story of their birth and growth is so simply told as to interest the most indifferent reader.

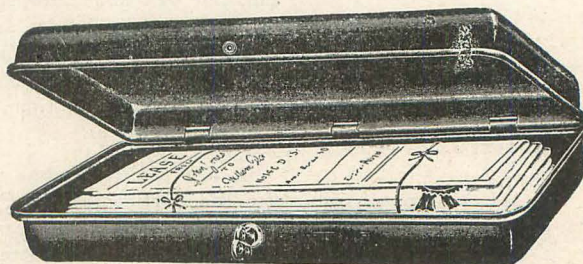
To present to the traveler the record of the country thru which he is passing, as he reads, the book therefore not only describes what is to be seen but recalls events, both human and geological, that compel the reader's interest. In considering a great semi-arid cattle range standing today thousands of feet above sea level, for instance, the text presents a brief picture of the prehistoric age when this part of the United States was an inland sea or a vast swamp, whose low-lying shores and islands were covered with dense semi-tropical vegetation and teemed with huge beasts and strange reptiles, long ago extinct. Later the region swarmed with buffaloes and Indians; then came the hardy American pioneer, and now, as related in the guidebook, its inhabitants are engaged in developing its resources and industries and the mineral wealth that lies hidden beneath its surface.

The Northern Pacific guidebook includes 212 pages and contains 27 reproductions of photographs, 38 text illustrations, and 27 topographic maps covering the entire route, which have been prepared with a degree of accuracy never before attempted in a guidebook.

The information given in this guidebook should afford the traveler a most excellent comprehension of the country traversed. As has been well stated, to the average traveler a trip from the Mississippi valley to the Pacific Coast means at its end only a jumble of impressive scenery, with vast deserts and lofty mountains, and here and there some unusual feature, generally scenic, standing out from the mass

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and making a permanent impression on his memory. If, however, the traveler has provided himself with one of the geological survey's guidebooks the interest of his trip and the information he gains is immensely increased.

### HOSPITALITY—OLD AND NEW

We hear a lot about the hospitality of our grandmothers' and great grandmothers' times and a considerable regret that it has died out. Don't let's regret it, let's thank goodness it has.

That style of hospitality which left the latch key forever hung out is a crime. It gave any one a perfect right, whenever he took a fancy, to gather his children about him (and they ranged from five to ten in number) and ride down on any unsuspecting people. Whereupon the women of the visited household must drop whatever they were doing or planning to do, greet the visitors, en-sonce them in the parlor, provide plush albums, the "Life of Daniel Boone," picture books or blocks and hie them to the kitchen to kill, stew, broil and bake.

Thank goodness, that's done no more. One knows definitely now when company is coming and—for the most part—how long they will stay. But the old idea of making an effort to entertain still remains and that is the reason, I believe, that hospitality is dying out. It is in reality a hardship and more and more we refuse to offer it. The women in town are inclined to think if they lived in the country it would be different. Just go out in the back yard and get fresh eggs and milk, fruit, chickens, with no expense or trouble. They wouldn't mind having company that way. And the woman in the country says, "Of course, when all one needs to do is step to the phone and have things, two-thirds of them already prepared, brought to the door, anyone could have company that way, but—" And so hospitality goes begging, and we become more and more self centered—which is deplorable.

There is a new style of hospitality, which is genuine and a joy to both entertainer and entertained.

Last Thanksgiving holidays I spent with an old school friend of mine. I got there Wednesday night and her small brother met me at the station. When we got to the house, Julia was enveloped in an enormous apron, cutting citron for the cake. Immediately after greetings she got me into a first cousin to her apron and set me to chopping raisins. We worked and

chattered all evening. The next morning the rest of the party came and were put directly to work, decorating, cleaning, stirring and running errands. Everything was gloriously informal, and in five minutes there was not a stranger in the crowd. Everyone declared it was the most successful house party he had ever gone to and the Williams had time to enjoy it, too.

That's what I mean by the new hospitality. It's good for us to have company and it's a joy to have it that way. Thanksgiving is an excellent time to begin—try it and see.—Ex.

### NORTH DAKOTA WHEAT YIELDS

Investigations in wheat growing have been carried on at fourteen points in the Great Plains Area by the U. S. Department of Agriculture. Four of these places are the North Dakota Sub-Stations where the North Dakota Experiment Station co-operates with the U. S. Department of Agriculture. The other stations are located in Montana, Wyoming, Colorado, South Dakota, Nebraska, Kansas and Texas.

Different cultural methods were tried, as spring and fall plowing, corn ground and summer fallow. The yields were practically the same on the fall and spring plowing. The largest yields were secured on summer tilled land, tho yields on disced corn land were nearly as good, and the profits were much larger. The profit per acre for wheat on corn land averaged \$8.01 at the four North Dakota Sub-

Stations, while on summer tilled land it was \$3.55. The only other stations that gave a profit from the wheat on summer fallow was Judith Basin and Huntley, Mont., Scotts Bluff and North Platte, Nebr.

The yields on disced corn land were as follows at the different stations:

Williston, N. D. Sub-Station	16.2 bu.
Dickinson, N. D. Sub-Station	23.3 bu.
Edgeley, N. D. Sub-Station	17.7 bu.
Hettinger, N. D. Sub-Station	15.7 bu.
Belle Fourch, S. D.	8.8 bu.



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Amarillo, Tex.....	6.6 bu.
Judith Basin, Mont.....	22. bu.
Huntley, Mont.....	22.4 bu.

The largest yield of wheat both on corn land and on fallow was secured at the North Dakota Stations.

## Household Hints

By Aunt Maggie

### REMOVING STAINS

Now that school is in session again we believe that the following suggestions for removing stains will be helpful to mothers.

#### Grass Stains

Grass stains when fresh may be removed by sponging with alcohol.

If the stains are not fresh, a hot solution of tartaric applied before placing in boiling soap suds will be effective. If tartaric acid is not at hand wet the stain and apply cream of tartar or salts of lemon.

Or rub grass stains with molasses and wash in clear cold water without soap.

#### Ink Stains

Soak the article of clothing in milk, or use lemon juice and salt which also removes iron rust. If these fail, try oxalic acid. If this is not effective, try muriatic acid.

#### Grease Spots

If grease spots are on garments that cannot be washed, moisten the spot with butter or olive oil and rub with chloroform.

Or apply a hot saturated solution of alum with a sponge or brush.

#### Machine Grease

Rub baking-soda into the spot and pour boiling water thru until the spot is removed.

#### Mud Stains

Dip the mud stains in kerosene before putting them into the boiler.

#### Mildew

Boil in strong borax water.

To remove tea, coffee, chocolate, and cocoa stains: Use warm water, then a stream of hot water. For an old stain, use hydrogen peroxide (get at drug stores).

### TO COOK TURNIPS

Choose turnips of medium size, pare, cut in halves, and cook until tender in a small amount of boiling salted water. Allow the water to evaporate, mash the turnips, and add salt, pepper, butter, and a very little sugar. Or cut into small cubes before cooking, boil in mutton broth, and serve with boiled mutton.

### TO STEAM RICE

Put over the fire in a double boiler three cups of milk or water, or of the two mixed. Put into it one teaspoonful of salt. Look over one cup of rice, wash, put into the boiling liquid and cook, covered, without stirring, until the grains of rice are so soft as to be easily crushed between the thumb and finger. Take the cover off and let the rice dry a little. The grains will be distinct, and the rice palatable.

### BOSTON BAKED BEANS

Beans, one pint. Soak over night in plenty of cold water, and put to cook in cold water enough to cover the beans. Add one-half tablespoonful of salt, and one-fourth of a teaspoonful of soda. When boiling, drain off the water, and in the bottom of the bean jar put one-fourth of a pound of salt pork, scored, two level tablespoonfuls of sugar, and one-half scant tablespoonful of salt. Put beans into the jar, cover them with hot water, cook in a slow oven for ten, twelve, or fifteen hours.

### MADE MUSTARD FOR COLD MEATS

Best mustard, one and one-half level tablespoonfuls; sugar, one level tablespoonful; salt, one-half teaspoonful; vinegar, one-fourth cup; butter, one teaspoonful. Mix ingredients, and cook until it thickens, then add the yolk of one egg, well beaten, cool, and use.

### GENERAL SUGGESTIONS FOR SPONGE AND ANGEL CAKE

In making these cakes always use pastry flour. Have the bowl and beater perfectly dry before beating the whites, as any moisture will prevent their beating up light. Eggs beat quicker and lighter when cool; consequently they should be kept in some cool place until needed. Add a pinch of salt to the whites, and beat. This toughens the fiber and helps retain the air. The lightness of the sponge cake depends principally on the amount of air beaten into the eggs. Care must be taken in adding the flour. It must be folded or blended in, never beaten. Beating the batter after the flour is

added breaks the air-bubbles, thins the pastry and makes the cake tough and heavy. Do not grease the tins. Layer-cakes do not need to be inverted out of the baking pans. Let them cool in the tins to prevent shrinking. Bake in a moderate oven.

To make the tomato sauce, stir one tablespoonful of butter and one of flour together over the fire, add one cupful of strained canned (or stewed) tomatoes and stir until it boils and is smooth; season with salt and pepper and a little onion juice or not as preferred.

For a potato omelet use two tablespoonfuls of finely chopped cold boiled potatoes, and half a teaspoonful of chopped onion to every egg; fry the onion in butter, add the potatoes, salt and pepper; stir lightly; spread over half the omelet, fold and serve at once. If preferred the onion may be omitted and a flavoring of chopped parsley added just before it is spread.

### RAISIN COOKIES

Two cupfuls sugar, one cupful sweet milk, two-thirds cupful shortening, half-cupful seeded raisins, four heaping teaspoonfuls baking powder, pinch salt, and flour enough to roll. Make cookies rather thick.

### SPICED CHOCOLATE CAKE

Two cupfuls sugar, one cupful sour milk or butter milk, one-half cupful butter, small, two large cupfuls flour, four eggs save whites of two for frosting, one teaspoonful soda, one teaspoonful cinnamon, one teaspoonful cloves, one teaspoonful allspice, nutmeg, one-half cake of chocolate or less. Bake in layers.

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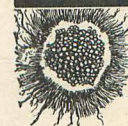
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## Seasonable Receipts

Edited by Mrs. Sadie Baird.

### QUINCE AND APPLE CONSERVE

Pare, core and quarter as many sour apples as desired to preserve in this manner; pare, core and separate into eighths, one-fourth as many quinces. Make a syrup of one quart of water and three-fourths as much sugar in pounds as there are apples and quinces combined. Drop in the quinces first, let them cook thirty minutes, then add the apples and cook all together until tender and well preserved. Seal.

### APPLE SNOW PUDDING

One pint of smoothly-stewed apple sauce, sweetened to taste and slightly salted. Beat the white of an egg to a stiff froth, add to the apple sauce and beat both together two or three minutes with an egg beater. Heap on a glass dish, and pour around it a sauce made from the yolk of the egg, one cup milk, one-half cup sugar, one small teaspoonful corn starch, and one-half teaspoonful vanilla extract, cooked like soft custard.

### BAKED APPLES PAR EXCELLENCE

Peel and core good-sized apples, place in the baking tin, fill the centers with sugar, with a bit of butter on top, put a little water in the tin and bake till tender in rather a hot oven which will brown them slightly. Whip and sweeten some cream, and half fill

individual sauce dishes with it. In the center of each dish place one of the baked apples, with a bit of red jelly on top.

### CREAM CORN BREAD

Two cupfuls of corn meal, two cupfuls of flour, one cupful of sour cream, one cupful of milk, one and one-third teaspoonful of soda, one tablespoonful of sugar and one rounded tablespoonful of lard melted and poured into the milk. Mix all together and bake. If you do not have sour cream, use two cupfuls of sour milk or buttermilk. This is fine, and requires no eggs.

### IRISH STEW

To one quart of water add two large potatoes, pared and diced; 1 medium sized onion, sliced fine; one stalk of celery diced, and one good-sized carrot cut into small pieces. Add meat scraps or trimmings, or fresh meat cut into small cubes. Left-over meat may be cut up into bits and used in the stew. Cook slowly till the vegetables are well done, then add one cupful of tomatoes, and salt and pepper to taste. Serve in a border of hot boiled rice.

### CORN RELISH

Three dozen medium-sized ears of corn; shaved off; two small heads of cabbage chopped, four green peppers chopped, two cupfuls sugar, one-half cupful salt, one teacupful ground mustard (dissolved) and two quarts vinegar. Cook all together and seal hot. Do not open for six weeks.

### CHOCOLATE-CREAM CAKE

Three eggs beaten separately, two and one-half cupfuls of flour, one and three-quarter cupfuls of sugar, one cupful of sweet milk, one scant cupful of butter, two level teaspoonfuls baking-powder, one-quarter pound of chocolate melted over hot water with one tablespoonful of cocoa, vanilla.

#### Filling for Chocolate-Cream Cake

Four tablespoonfuls of sweet cream, one cupful of XXXXsugar, one teaspoonful of butter, one tablespoonful of cocoa, vanilla. Mix thoroly, put over a vessel of hot water and stir to a smooth cream. Let cool a little before spreading on cake, or it will run.

### SPICE CAKE

One cupful of butter, one cupful of sugar, three cupfuls of flour, one scant cupful of molasses, one cupful of buttermilk, one teaspoonful of soda, two

eggs, one rounding teaspoonful of cinnamon, one scant teaspoonful of nutmeg.

### PRUNE CONSERVE

Take four pounds fresh prunes, remove the pits, mix with the fruit four pounds sugar, the juice of four oranges and thin strips of yellow rind which have been separated from the pithy part, one pound raisins and the meats of a pound of walnuts broken into small pieces. Boil together until thick. Put into jelly glasses and cover with parafine.

### PICKLED ONIONS

Boil small silver skinned onions in milk and water ten minutes, drain. To one gallon vinegar add one-half ounce stick cinnamon, one-half ounce mace, one-fourth ounce whole cloves, small teacup salt and one-half ounce alum. Scald and turn over the onions.

### SALMON CUTLETS

One cup salmon, one cup hot mashed potatoes; salt and pepper to taste. Shape in the form of cutlets. Dip in egg and cracker crumbs and fry in deep fat, or on a hot spider.

### OAT MEAL BREAD

One cupful oat meal. Pour two cupfuls boiling water over this and let it stand one hour. One-half teaspoonful salt, one-half cupful molasses, one yeast cake dissolved in a little warm water, four and one-half cupfuls white flour. Knead as other bread. Make in small loaves. Let rise. Bake slower and longer than other bread.



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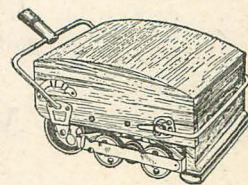
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